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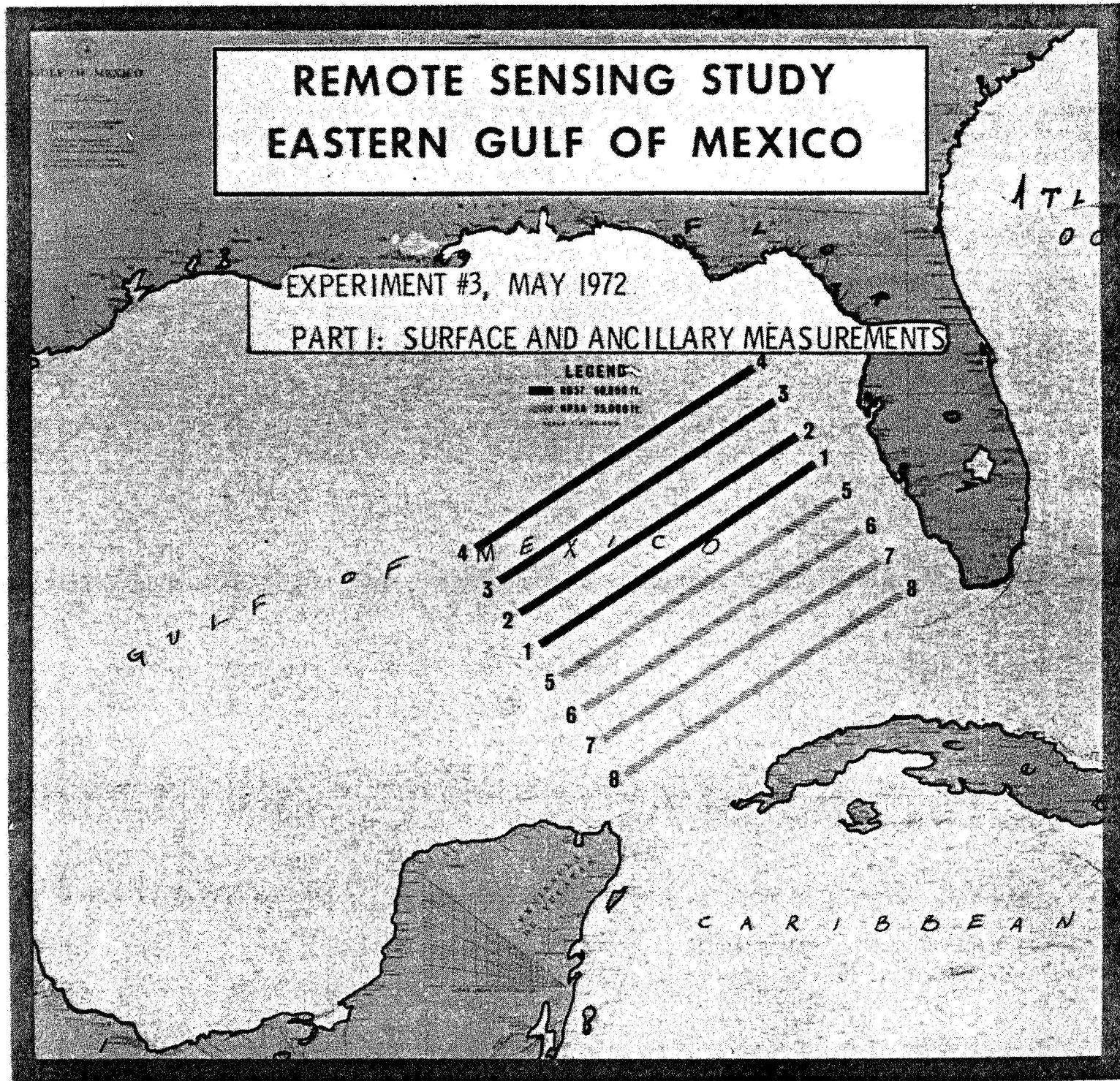
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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EARTH RESOURCES LABORATORY

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EASTERN GULF OF MEXICO REMOTE SENSING STUDY

EXPERIMENT NO. 3, MAY 1972

PART I: SURFACE MEASUREMENTS

**Dr. Robert D. Boudreau
Principal Investigator**

July 1972

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<u>Boat</u>	<u>Observers</u>
Big Fisherman	T. R. Lemon and T. J. Rafferty
Explorer II	L. R. Jordan and D. Powell
Risttoda M	J. E. Jones
Captain Dave	G. D. Jarrell
Peck Williams	J. Brashier and J. E. Craft
Captain Anderson	W. C. Langenhenning and W. E. Colliver
Captain Dee Bold	B. Skipper

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INTRODUCTION

As part of the remote sensing program of the NASA Earth Resources Laboratory, a study of the currents in the eastern Gulf of Mexico is being undertaken. The primary objective of this study is the development of remote sensing techniques to be applied to studies of the world oceans. Initially the study is being conducted utilizing the remote sensing instrumentation aboard NASA aircraft. These aircraft studies are being pursued in such a manner as to allow a logical progression from aircraft data to satellite measurement of parameters found useful in studying ocean systems from aircraft.

The eastern Gulf of Mexico is of particular interest due to the existence of the "Loop Current". The strong current which enters the Gulf of Mexico through the Yucatan Strait and eventually exists through the Florida Strait often develops a pronounced loop which extends into the northern part of the eastern Gulf. Previous oceanographic studies (e.g., Leipper, 1970) appear to indicate that the Loop Current is a seasonal phenomenon. During the spring months, the Loop develops and reaches its northernmost extent in late summer. In the fall of the year, the Loop appears to detach itself from the main current and forms a gyre which drifts in the northeastern portion of the Gulf and eventually dissipates.

In order to observe the seasonal variations in the Loop, three experiments were designed to be undertaken in November 1971, February 1972, and May 1972 using the NASA RB57 and NP3A aircraft. The surface measurements for the November 1971 (experiment #1) are reported elsewhere (Boudreau, 1971).

The analysis of the November experimental data is underway and will be reported at a later date. Because of maintenance and scheduling conflicts, the NASA aircrafts were not available for the planned February 1972 (experiment #2) causing its cancellation. This report contains the measurements made to assist in the analysis and interpretation of remotely sensed data taken in the May 1972 (experiment #3).

Reported here are shipboard measurements which are to be used as "ground truth" for the remotely sensed data and include temperature, salinity and chlorophyll. The temperature, salinity and chlorophyll will be determined remotely using an infrared radiometer, a microwave radiometer and a photographic technique, respectively. It was realized at the outset of this series of experiments that it would be essential to develop techniques for correcting the remotely sensed data for the effects the atmosphere had on the radiation being detected by the remote sensor. The surface measurements and the meteorological data presented here will be used to determine the correction (Boudreau, 1972) to be applied to the 8-14 μm sensor data due to the absorption and emission of 8-14 μm radiation by atmospheric constituents. The influence of the atmosphere on remote sensing experiments should not be underestimated. In order to remotely sense the sea surface from aircraft or satellite with visible and infrared instruments, there must be no clouds in the field of view of the sensor because clouds are nearly opaque to these wavelengths.

This experiment was scheduled for the first day during the period 9-14 May which had less than 30 percent cloud cover beneath the aircraft and seas calm enough to allow small (40-65 ft) boats to make surface measurements. The experiment was planned to cover the Southeastern Gulf concurrently with the RB-57 at 60,000 feet and the NP3A at 25,000 feet as shown on the front cover. However, due either to instrument mal-

function or the existence of widespread cirrus clouds, the RB-57 did not participate in the experiment, and the NP3A flew all the flight lines in the manner shown in Figure 1. A cold front moved into the northern part of the experiment area on May 9 and 10 (see Figs.12 and 14) causing the experiment to be delayed until May 11. On May 11, the front had become ill-defined and stationary in the southern part of the experiment area. The southern half of the experiment area was selected for overflight but the NP3A aborted the experiment after only the southern-most line was flown because the aircraft's data recording system failed. Because the incipient wave on the front(Figs.18 and 20) in the northern Gulf was forecast to move the front into the northern part of the experiment area on May 13, it was decided to attempt flying the northern half on May 12 despite marginal (20 to 40%) cloud conditions. The northern half was flown on May 12 but not as planned; due to a navigation error the first line flown was a diagonal between two adjacent, planned lines (Fig.1). In an attempt to compensate for this error, the next line flown was parallel to the first. The remainder of the lines were flown as originally planned.

On May 13, the NP3A began flying the southern half but had to abort the experiment on the southern-most line because the aircraft's data recording system failed again. The clouds associated with the front which moved into the northern half of the experiment area (Fig.22) on May 14 did not affect the southern half but due to aircraft maintenance the start of the experiment was delayed until afternoon. The delay resulted in only three of the planned four flight lines being flown.

In addition to the observations made at the time of overflight, the ground truth boats also took hourly observations of air and water temperatures going to, returning from, and while on their station. All these observations are presented here together with maps showing the boat tracks.

MATERIALS AND METHODS

Field measurements were made and water samples taken at eight stations during Eastern Gulf of Mexico Experiment II (Figures 1-9). Most of the participants also took measurements and samples enroute to station and returning to port.

Two gallons of sample were taken with a bucket at each station for chlorophyll and salinity analyses. These samples were taken as near the surface as possible.

Water samples at each station were analyzed for chlorophyll by using a sample volume of 2-8 liters. The technique used was essentially that proposed by SCOR-UNESCO working group 17 in Determination of Photosynthetic Pigments in Sea-Water, UNESCO, Paris, 1969. Each water sample for chlorophyll analysis was filtered through a millipore 0.45 micron acetate filter. Samples from stations 1, 2, and 5 were filtered aboard ship. The remaining chlorophyll samples were filtered at Sarasota, Florida. Filters and their residue were frozen and then stored at Mississippi Test Facility at -15° C. Each filter and its residue was ground in a teflon tissue grinder. Ninety percent acetone was used as the extracting agent. The acetone homogenates were stored in the dark for ten minutes, then centrifuged at 2000 g for approximately eighty minutes instead of the recommended ten minutes because the extract was too turbid. The volume of each extract was recorded and the absorption spectrum of the chlorophyll extract measured against a blank acetate filter dissolved in 90% acetone. The measurements were made on a Carey 17 Spectrophotometer.

The absorption spectra were indexed at 750, 663, 645 and 630 $m\mu$. The absorption at 663, 645 and 630 $m\mu$ was corrected by comparison with

Materials and Methods Cont'd.

the absorption of the "reference blank" at 750 m μ . These corrected values are used in the following formula to determine chlorophyll A.

$$\text{chl A} = (11.64 \times e_{663} - 2.16 \times e_{645} + 0.10 \times e_{630}) \times$$

$$\frac{\text{ext (ml)}}{\text{vol (l)}} \times \frac{1}{\text{absorption cell light path (cm)}}$$

where e_{663} = absorption at 663 m μ

e_{645} = absorption at 645 m μ

e_{630} = absorption at 630 m μ

ext = extract volume

vol = volume of sample

Salinities were run with a Beckman Model RS-7B Induction Salinometer. Standard(35 ‰) sea water was used as a reference and salinities were determined from the conductivity ratio of the sample to that of the standard. Temperature and instrument drift corrections were made according to the Beckman manual.

Surface water temperature measurements were made by taking bucket samples and immersing a mercury bulb thermometer in the center of the bucket. Stations 1, 2 used bucket thermometers manufactured by InterOcean Systems.

Air temperature measurements were also taken with mercury bulb thermometers and were taken on the shady side of the boat as close as possible to the water surface.

Water transparency was determined with secchi disks.

Dew point values were obtained with sling psychrometers.

Materials and Methods Cont'd.

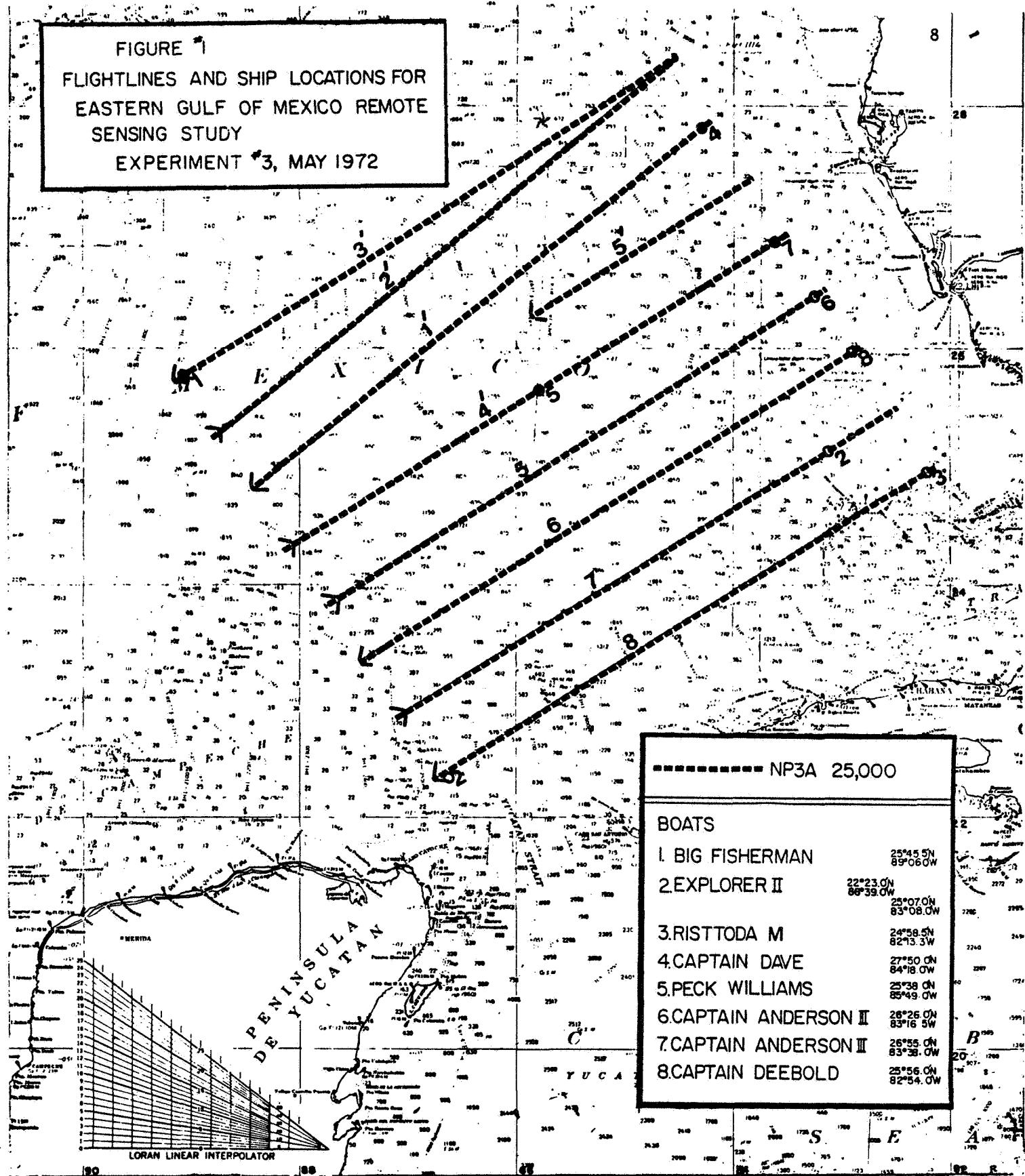
Water current measurements were taken with plastic bottles filled to 3/4 capacity. Direction and time required for the bottle to travel 75 feet were measured.

Wind speed, wind direction, and sea state observations were usually estimated.

Below is a nomenclature list for data computations and listings made with the Univac 1108.

<u>Column</u>	<u>Abbreviation</u>	<u>Name</u>
1	STA NUM	Station Number
2	SAMP NUMB	Sample Number
3	DAY	Day of the Month
4	TIME EDT	Time In Eastern Daylight Time
5	LATITUDE	Latitude
6	LONGITUDE	Longitude
7	SALIN PTS/K	Salinity in Parts per Thousand
8	CHLOR PHY A MG/M ³	Chlorophyll A in milligrams per meter cubed
9	WATER TEMP C	Water temperature in Degree C
10	AIR TEMP C	Air temperature in degrees C
11	DEW PONT C	Dew point in degrees C
12	WIND SPD KN	Wind speed in knots
13	WIND DIR	Wind direction
14	CUR KN	Current speed in knots
15	CUR DIR	Current direction
16	SEA STA FT	Sea state in feet
17	PRT5 TEMP C	Precision Radiation Thermometer temperature in Degrees C
18	REMARKS	Remarks

FIGURE 1
FLIGHTLINES AND SHIP LOCATIONS FOR
EASTERN GULF OF MEXICO REMOTE
SENSING STUDY
EXPERIMENT #3, MAY 1972



Shipboard Measurements

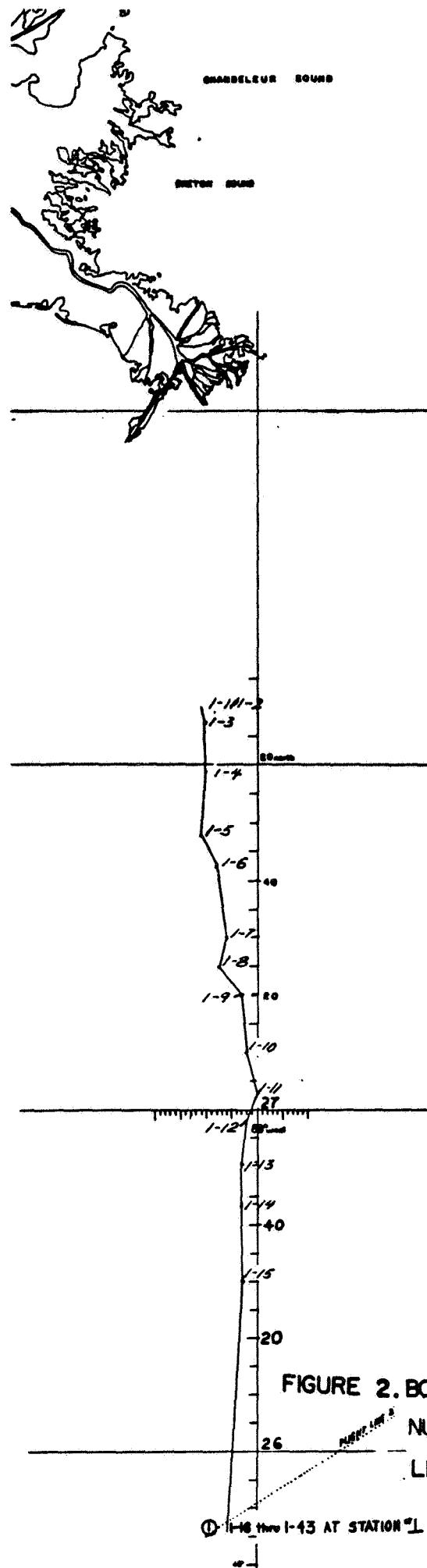


FIGURE 2. BOAT TRACK OF THE BIG FISHERMAN
NUMBERS REFER TO OBSERVATIONS
LISTED IN TABLE NUMBER 1

TABLE I
SHIPBOARD SURFACE MEASUREMENTS

STA SAMPLE NUM NUMB	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLON	WATR PHY A	AIR TEMP	DEB PNT	WIND SPD	CUR DIR	CUR KN	SEA DIR	SEA FT	PKTS	REMARKS
1	1	10 1000	28 10.0 N	89 11.0 W	34.50	39	23.4	24.6	21.4	8	NE	••••	N	5	23.5	SAL=33.7 T=23.3
1	2	10 1100	28 10.0 N	89 11.0 W	•••••	•••••	23.6	24.9	21.0	12	NE	••••	N	5	24.0	SAL=34.0 T=24.3
1	3	10 1200	28 07.0 N	89 10.0 W	•••••	•••••	23.8	24.8	20.6	12	NE	••••	N	5	24.1	SAL=33.5 T=24.8
1	4	10 1300	27 58.0 N	89 10.5 W	•••••	•••••	24.5	24.7	20.6	12	NE	••••	N	5	24.1	SAL=34.1 T=24.8
1	5	10 1400	27 48.0 N	89 11.0 W	•••••	•••••	23.9	24.7	20.6	14	NE	••••	N	5	24.1	SAL=34.5 T=25.4
1	6	10 1500	27 42.5 N	89 08.0 W	35.60	05	24.2	24.8	21.6	14	E	••••	N	5	24.1	SAL=35.7 T=24.8
1	7	10 1600	27 30.0 N	89 06.0 W	•••••	•••••	24.3	24.6	21.6	12	E	••••	N	5	24.0	SAL=35.1 T=24.7
1	8	10 1700	27 25.0 N	89 07.5 W	•••••	•••••	24.1	24.7	21.6	12	E	••••	N	5	24.2	SAL=35.3 T=25.0
1	9	10 1800	27 20.0 N	89 03.0 W	•••••	•••••	24.4	24.7	22.6	12	E	••••	N	5	24.9	SAL=35.4 T=25.6
1	10	10 1900	27 10.0 N	89 02.0 W	•••••	•••••	24.9	24.8	23.0	12	E	••••	N	5	24.9	SAL=36.2 T=25.2
1	11	10 2000	27 03.0 N	89 00.0 W	36.29	16	25.1	24.6	23.0	10	E	••••	N	5	25.2	SAL=36.1 T=25.3
1	12	10 2100	26 58.0 N	89 02.0 W	•••••	•••••	24.7	24.6	22.9	14	E	••••	N	5	25.2	SAL=36.4 T=25.2
1	13	10 2200	26 50.0 N	89 03.0 W	•••••	•••••	25.1	24.9	22.0	16	SE	••••	N	6	25.2	SAL=36.4 T=25.5
1	14	10 2300	26 44.0 N	89 03.0 W	•••••	•••••	25.1	24.9	21.0	18	SE	••••	N	10	25.3	SAL=36.5 T=25.3
1	15	11 0	26 30.0 N	89 03.0 W	•••••	•••••	25.4	25.1	22.0	22	SE	••••	N	14	••••• SAL=36.4 T=25.7	

* Salinity and temperature measurements listed under remarks were made with the RS-5 Salinometer.

TABLE I
SHIPBOARD SURFACE MEASUREMENTS

STA SAMP NUM NUMB	DAY TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A HG/M3	AIR TEMP C	DEW TEMP C	WIND POINT C	WIND SPD KN	WIND DIR KN	CUR DIR KN	SEA DIR FT	REMARKS	
														*	
1 14 11 1000 25 45.5 N 89 06.0 W 36.93 .16 25.0 26.5 23.7 16 SE .000 E 12 25.0 5 SAL=35.1 T=26.6															
1 17 11 1100 25 45.5 N 89 06.0 W .0000 26.3 27.5 24.2 16 SE .000 E 12 25.0 5 SAL=36.4 T=27.2															
1 18 11 1200 25 45.5 N 89 06.0 W .0000 26.3 27.5 23.7 16 SE .000 E 12 25.0 5 SAL=35.5 T=28.2															
1 19 11 1315 25 45.5 N 89 06.0 W .0000 26.8 28.4 23.2 16 SE .000 E 12 25.0 5 SAL=36.5 T=27.0															
1 20 11 1400 25 45.5 N 89 06.0 W .0000 26.7 28.5 23.2 16 SE .000 E 12 25.0 5 SAL=36.5 T=28.0															
1 21 11 1515 25 45.5 N 89 06.0 W 36.58 .06 26.5 28.7 23.7 16 SE .000 E 12 25.0 5 SAL=36.4 T=28.2															
1 22 11 1600 25 45.5 N 89 06.0 W .0000 26.7 29.0 23.3 14 SE .000 E 10 25.0 5 SAL=36.6 T=29.4															
1 23 11 1700 25 45.5 N 89 06.0 W .0000 26.5 30.3 23.0 14 SE .000 E 10 25.0 5 SAL=35.9 T=27.9															
1 24 11 1800 25 45.5 N 89 06.0 W .0000 26.5 30.8 23.4 14 SE .000 E 10 25.0 5 SAL=36.8 T=27.1															
1 25 11 1900 25 45.5 N 89 06.0 W .0000 26.6 29.2 23.4 14 SE .000 E 10 25.0 5 SAL=36.4 T=26.8															
1 26 11 2000 25 45.5 N 89 06.0 W 37.01 .07 26.3 27.0 24.1 14 SE .000 E 10 25.0 5 SAL=36.1 T=26.9															
1 27 11 2100 25 45.5 N 89 06.0 W .0000 26.7 25.6 24.1 16 SE .000 E 12 25.0 5 SAL=36.1 T=26.4															
1 28 11 2200 25 45.5 N 89 06.0 W .0000 26.7 25.6 24.1 16 SE .000 E 12 25.0 5 SAL=36.3 T=26.6															
1 29 11 2300 25 45.5 N 89 06.0 W .0000 26.3 26.1 24.1 16 SE .000 E 12 25.0 5 SAL=36.3 T=26.5															
1 30 12 0 25 45.5 N 89 06.0 W .0000 26.3 26.7 25.1 20 SE .000 E 14 26.0 2 SAL=36.3 T=26.6															

*Salinity and temperature measurements listed under remarks were made with the RS-5 Salinometer.

TABLE I
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUMB	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR	AIR	DEW	WIND	CUR	SEA	PNLs	REMARKS
1	31	0	0	0	0	0	0	0	0	0	0	0	0	0000 100 NOUGH
1	32	12 000	25 45.5 N	89 06.0 W	36.72	•11	26.3	27.3	23.7	18	SE	0000	E 14	26.0 4 SAL=36.2 T=26.5
1	33	12 900	25 45.5 N	89 06.0 W	00000	00000	26.3	27.6	24.7	18	SE	0000	E 14	26.0 4 SAL=36.0 T=26.7
1	34	12 1000	25 45.5 N	89 06.0 W	00000	00000	26.3	27.2	24.2	18	SE	0000	E 14	26.0 3 SAL=35.9 T=26.9
1	35	12 1030	25 45.5 N	89 06.0 W	00000	00000	26.6	28.0	24.2	16	SE	0000	E 12	26.0 1 SAL=35.9 T=27.4
1	36	12 1100	25 45.5 N	89 06.0 W	00000	00000	26.8	27.7	23.8	19	SE	0000	E 12	25.0 0 SAL=36.0 T=27.0
1	37	12 1130	25 45.5 N	89 06.0 W	00000	00000	26.4	28.6	24.9	19	SE	0000	E 12	26.0 0 SAL=35.8 T=27.3
1	38	12 1200	25 45.5 N	89 06.0 W	00000	00000	26.6	27.7	24.3	19	SE	0000	E 10	25.0 9 SAL=36.0 T=27.2
1	39	12 1230	25 45.5 N	89 06.0 W	00000	00000	26.9	28.7	24.9	19	SE	0000	E 10	25.0 6 SAL=35.6 T=28.1
1	40	12 1300	25 45.5 N	89 06.0 W	36.55	00000	27.0	28.1	23.6	19	SE	0000	E 10	25.0 2 SAL=35.6 T=27.9
1	41	12 1330	25 45.5 N	89 06.0 W	00000	00000	26.9	28.2	25.4	19	SE	0000	E 10	25.0 0 SAL=34.8 T=28.0
1	42	12 1400	25 45.5 N	89 06.0 W	00000	00000	26.8	28.7	24.3	19	SE	0000	E 10	25.0 0 SAL=34.0 T=27.6
1	43	12 1455	25 45.5 N	89 06.0 W	36.40	•03	26.9	28.4	25.4	19	SE	0000	E 10	25.0 7 SAL=34.8 T=28.0

* Salinity and temperature measurements listed under remarks were made with the RS-5 Salinometer.

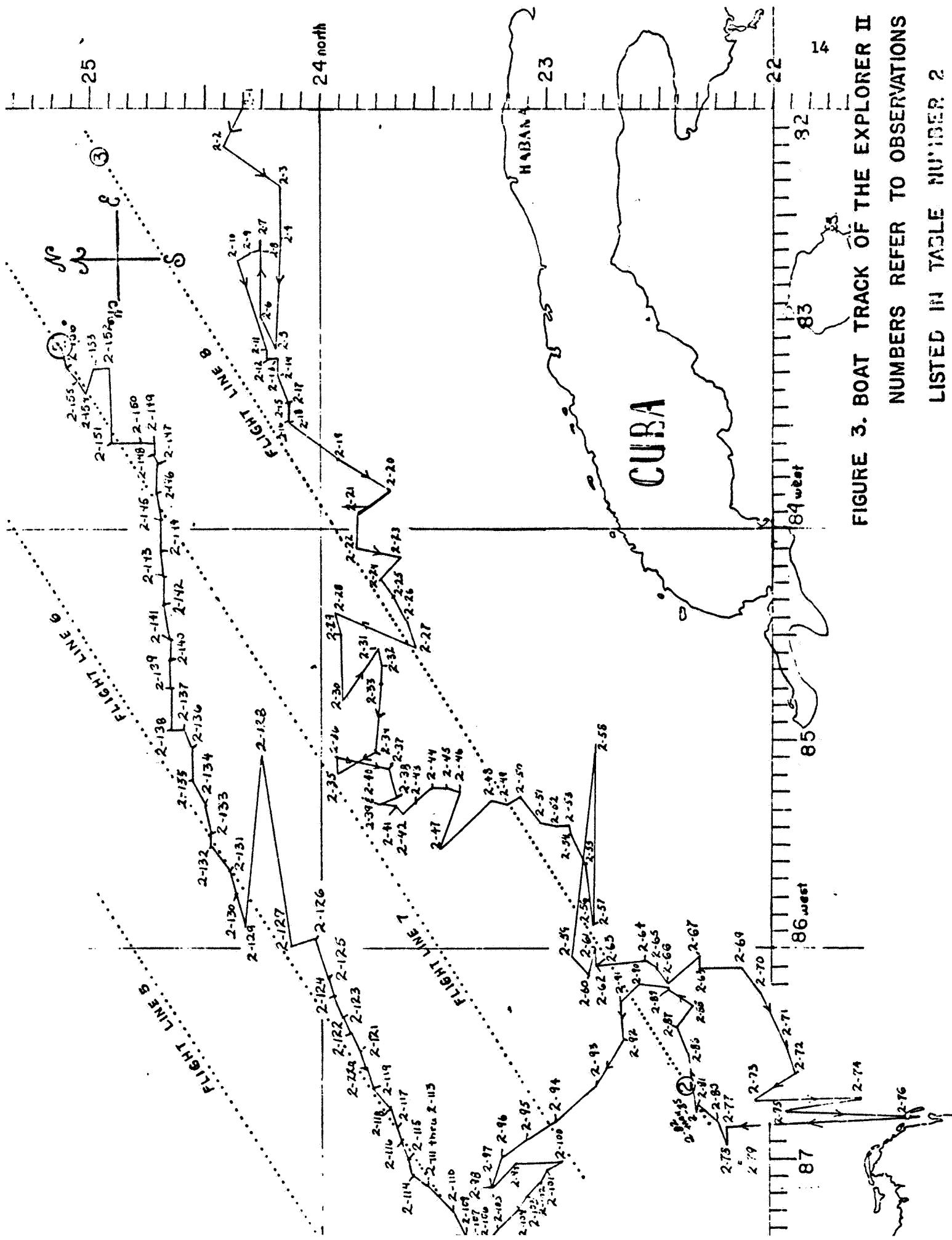


FIGURE 3. BOAT TRACK OF THE EXPLORER II
NUMBERS REFER TO OBSERVATIONS
LISTED IN TABLE NUMBER 2

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUM	SAMP TIME	LATITUDE	LONGITUDE	SALIN	CHLON	WATR PHY A PT5/K MG/M3	AIR TEMP C	DEW TEMP C	WIND DIR SPD KN	CUR DIR KN	SEA DIR FT	PHTS C	REMARKS
2 1	7 300	24 20.0 N	82 00.0 W	•••••	•••••	25.0	25.4	22.6	14	E	••••	4	••••
2 2	7 400	24 24.0 N	82 10.0 W	•••••	•••••	25.1	25.3	22.6	14	E	••••	4	••••
2 3	7 500	24 15.0 N	82 22.0 W	•••••	•••••	25.1	25.3	22.6	14	E	••••	4	••••
2 4	7 600	24 15.0 N	82 37.0 W	•••••	•••••	25.2	25.3	22.6	••••	••••	3	••••	••••
2 5	7 700	24 11.0 N	83 09.0 W	•••••	•••••	25.1	25.4	23.1	4	SE	••••	3	••••
2 6	7 800	24 15.0 N	83 00.0 W	36.85	•35	25.2	24.1	22.7	12	SE	••••	3	••••
2 7	7 900	24 15.0 N	82 37.0 W	•••••	•••••	26.5	26.3	22.7	14	SE	••••	4	••••• LORAN
2 8	7 1000	24 15.0 N	82 39.0 W	•••••	•••••	26.9	26.7	22.7	6	SE	••••	5	••••
2 9	7 1100	24 18.0 N	82 41.0 W	•••••	•••••	26.8	26.9	22.2	6	E	••••	5	••••
2 10	7 1200	24 21.0 N	82 42.0 W	•••••	•••••	26.4	26.8	22.2	12	SE	••••	6	••••• LORAN
2 11	7 1300	24 14.0 N	83 09.0 W	36.85	•15	25.8	26.5	21.7	15	SE	••••	4	••••
2 12	7 1400	24 11.0 N	83 11.0 W	•••••	•••••	25.2	26.0	22.1	14	SE	••••	4	••••
2 13	7 1500	24 10.0 N	83 10.0 W	•••••	•••••	26.4	26.5	23.6	17	SE	••••	5	••••
2 14	7 1600	24 10.0 N	83 18.0 W	•••••	•••••	26.8	26.7	22.2	14	E	••••	5	••••
2 15	7 1700	24 08.0 N	83 25.0 W	•••••	•••••	27.0	26.7	22.2	16	E	••••	7	••••

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA NUM	SAMP NUM	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A PTS/K MG/M3	TEMP C	ATM TEMP C	DEW PNT C	WIND SPD KN	CUR DIR KN	SEA STA DIR FT	PHB TEMP C	REMARKS
2	16	7	1800	24 08.0 N	03 30.0 W	37.50	.07	27.1	26.9	22.7	15	E	0000	0	0000	
2	17	7	1900	24 08.0 N	03 25.0 W	0000	0000	27.3	26.8	22.7	15	NE	0000	5	0000	SEXTANT
2	18	7	2000	24 01.0 N	03 30.0 W	0000	0000	26.5	26.5	23.6	17	E	0000	4	0000	
2	19	7	2100	23 55.0 N	03 40.0 W	0000	0000	27.0	26.6	23.7	15	E	0000	4	0000	
2	20	7	2200	23 40.0 N	03 50.0 W	0000	0000	26.9	26.7	23.2	15	E	0000	4	0000	
2	21	7	2300	23 50.0 N	03 55.0 W	37.01	.03	26.4	26.6	23.7	15	SE	0000	5	0000	
2	22	8	0	23 50.0 N	04 05.0 W	0000	0000	26.9	26.5	24.6	16	SE	0000	5	0000	
2	23	8	100	23 49.0 N	04 08.0 W	0000	0000	26.9	26.5	24.6	17	SE	0000	5	0000	
2	24	8	200	23 45.0 N	04 15.0 W	0000	0000	27.0	26.5	24.6	17	SE	0000	4	0000	ESTIMATED POS
2	25	8	300	23 40.0 N	04 20.0 W	0000	0000	27.0	26.5	23.7	17	SE	0000	4	0000	ESTIMATED POS
2	26	8	400	23 37.0 N	04 27.0 W	37.57	.05	27.2	26.5	24.7	16	SE	0000	4	0000	ESTIMATED POS
2	27	8	500	23 35.0 N	04 32.0 W	0000	0000	27.3	26.3	25.1	16	SE	0000	3	0000	ESTIMATED POS
2	28	8	600	23 35.0 N	04 25.0 W	0000	0000	27.4	26.5	25.7	15	SE	0000	3	0000	ESTIMATED POS
2	29	8	700	23 35.0 N	04 30.0 W	0000	0000	27.4	26.5	25.7	12	SE	0000	3	0000	ESTIMATED POS
2	30	8	800	23 35.0 N	04 39.0 W	0000	0000	27.4	26.9	25.7	16	E	0000	4	0000	ESTIMATED POS

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUM	SAMP TIME	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A	AIR TEMP C	DEW TEMP C	WIND PONT SPD KN	WIND DIR KN	CUR DIR FT	PNTS STA TEMP C	REMARKS
PTS/K	AG/M3														
2 31	8 900	23	45.0 N	04 34.0 W	36.62	.07	27.4	27.0	24.2	14	SE	••••	•	••••	••••
2 32	8 1000	23	44.0 N	04 39.0 W	•••••	•••••	27.4	27.3	24.2	18	SE	••••	•	••••	SEXTANT
2 33	8 1100	23	44.0 N	04 44.0 W	•••••	•••••	27.5	27.5	22.6	12	SE	••••	•	••••	••••
2 34	8 1200	23	46.0 N	05 04.0 W	•••••	•••••	27.6	27.7	22.6	13	SE	••••	•	••••	LORAN
2 35	8 1300	23	56.0 N	05 10.0 W	•••••	•••••	27.7	27.4	22.6	13	SE	••••	•	••••	ESTIMATED POS
2 36	8 1400	23	56.0 N	05 07.0 W	36.51	.04	27.8	27.6	22.6	13	SE	••••	•	••••	LORAN
2 37	8 1500	23	42.5 N	05 10.5 W	•••••	•••••	28.1	28.0	22.6	9	SE	••••	•	••••	LORAN
2 38	8 1600	23	43.0 N	05 17.0 W	•••••	•••••	28.4	28.3	23.3	8	SE	••••	•	••••	LORAN
2 39	8 1700	23	44.0 N	05 19.0 W	•••••	•••••	28.6	28.7	22.9	8	SE	••••	•	••••	LORAN
2 40	8 1800	23	44.0 N	05 19.0 W	•••••	•••••	28.6	28.5	23.3	5	S	••••	2	••••	LORAN
2 41	8 1900	23	40.0 N	05 20.0 W	36.86	.12	28.8	28.8	23.9	1	SE	••••	2	••••	LORAN
2 42	8 2000	23	39.0 N	05 22.0 W	•••••	•••••	28.3	27.5	22.6	1	SE	••••	3	••••	LORAN
2 43	8 2100	23	35.0 N	05 18.0 W	•••••	•••••	28.5	27.0	23.2	9	SE	••••	3	••••	SEXTANT
2 44	8 2200	23	31.0 N	05 15.0 W	•••••	•••••	28.1	27.1	23.2	8	E	••••	4	••••	SEXTANT
2 45	8 2300	23	27.0 N	05 15.0 W	•••••	•••••	28.1	27.1	23.2	6	E	••••	4	••••	SEXTANT

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUM	DAY	TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A PTS/K	AIR TEMP C	DEW TEMP C	WIND DIR SPD KN	CUR DIR SPD KN	PHS SEA STA TEMP C	REMARKS	
2 46	9	0	23 23.0 N	85 16.0 W	36.06	•••••	•••••	28.2	27.1	23•2	0 L	••••	4	••••
2 47	9	100	23 29.0 N	85 13.0 W	•••••	•••••	28.0	27.2	24•2	4 SE	••••	4	••••	
2 48	9	200	23 15.0 N	85 18.0 W	•••••	•••••	27.8	27.0	25•2	4 SE	••••	3	••••	
2 49	9	300	23 11.0 N	85 19.0 W	•••••	•••••	27.9	27.0	24•2	8 SE	••••	3	••••	
2 50	9	400	23 07.0 N	85 16.0 W	•••••	•••••	27.8	26.9	24•7	12 E	••••	4	••••	
2 51	9	500	23 02.0 N	85 25.0 W	36.50	•••••	27.6	26.7	24•2	9 E	••••	3	••••	
2 52	9	600	22 58.0 N	85 26.0 W	•••••	•••••	27.2	26.7	24•2	5 S	••••	3	••••	
2 53	9	700	22 54.0 N	85 26.0 W	•••••	•••••	27.8	26.2	25•1	5 S	••••	2	••••	
2 54	9	800	22 54.0 N	85 26.0 W	•••••	•••••	27.8	27.6	24•8	1 S	••••	2	••••	
2 55	9	900	22 50.0 N	85 37.0 W	•••••	•••••	27.9	28.0	24•8	1 SW	••••	1	••••	
2 56	9	1000	22 49.0 N	85 47.0 W	37.31	•••••	28.7	28.5	24•3	2 V	••••	1	••••	
2 57	9	1100	22 48.0 N	85 54.0 W	•••••	•••••	28.5	28.5	24•3	1 V	••••	1	••••	
2 58	9	1200	22 47.0 N	85 02.0 W	•••••	•••••	28.7	29.0	24•9	1 V	••••	1	••••	
2 59	9	1300	22 53.0 N	86 02.0 W	•••••	•••••	29.1	29.0	23•9	3 E	••••	1	••••	
2 60	9	1400	22 49.0 N	86 08.0 W	•••••	•••••	29.8	30.2	23•0	4 E	••••	1	••••	

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA	SAMP NUM	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLON	WATR PHY A PT5/K Hg/Hg	AIR TEMP C	DEW POINT C	WIND DIR	SPD KN	CUR DIR	CUR STA FT	SEA STA FT	PKTS TEMP C	REMARKS
2	61	9	1500	22 47.0 N	86 00.0 W	36.73	•10	29.8	30.2	24.7	•	56	••••	1	••••		
2	62	9	1600	22 47.0 N	86 05.0 W	•••••	•••••	29.3	29.8	23.0	1	SE	••••	1	••••		
2	63	9	1700	22 47.0 N	86 05.0 W	•••••	•••••	30.0	30.0	23.0	1	SE	••••	1	••••		
2	64	9	1800	22 34.0 N	86 04.0 W	•••••	•••••	29.5	30.0	22.0	1	V	••••	1	••••		
2	65	9	1900	22 30.0 N	86 06.0 W	•••••	•••••	28.5	29.5	22.9	1	SE	••••	1	••••		
2	66	9	2000	22 28.0 N	86 10.0 W	36.88	•09	28.7	28.8	22.9	2	SE	••••	1	••••		
2	68	9	2200	22 19.0 N	86 06.0 W	•••••	•••••	27.9	27.8	24.9	2	E	••••	1	••••	ESTIMATED POS	
2	69	10	0	22 06.0 N	86 06.0 W	•••••	•••••	27.7	27.9	24.2	6	NE	••••	1	••••	ESTIMATED POS	
2	70	10	200	22 04.0 N	86 13.0 W	•••••	•••••	26.2	26.4	24.7	10	E	••••	3	••••	ESTIMATED POS	
2	71	10	400	21 57.0 N	86 30.0 W	•••••	•••••	26.4	26.5	23.7	7	V	••••	2	••••	LORAN	
2	72	10	600	21 55.0 N	86 36.0 W	•••••	•••••	24.9	26.5	24.7	4	SE	••••	1	••••		
2	73	10	800	22 05.0 N	86 44.0 W	•••••	•••••	24.9	27.2	25.2	8	SE	••••	2	••••		
2	74	10	1000	21 37.0 N	86 43.0 W	36.69	•••••	26.5	27.2	25.2	8	SE	••••	2	••••	SAL AT 1056	
2	75	10	1200	21 56.0 N	86 47.0 W	•••••	•••••	27.2	27.4	24.2	10	E	••••	3	••••		
2	76	10	1400	22 21.0 N	86 49.0 W	36.79	•••••	27.4	27.5	23.0	11	SE	••••	3	••••		

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA STAMP NUM NUMB	DAY TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR PHY A MG/M3	WATR TEMP C	AIR TEMP C	DEA THMP C	PONT	WIND SPD KN	WIND DIK KN	CUR DIR KN	CUR DIR KN	SEA DIR FT	SEA DIR FT	PKTS C	REMARKS
2 77	10 1600	22 12.0 N	86 52.0 W	.....	.....	26.4	28.0	24.0	6	E	.....	2	.....	2	.....	
2 78	10 1800	22 12.0 N	86 57.0 W	.....	.....	27.4	27.4	25.4	10	E	.....	3	.....	3	.....	
2 79	10 2000	22 12.0 N	86 57.0 W	.....	.....	27.2	27.7	24.8	13	E	.....	5	.....	5	.....	
2 80	11 1000	22 15.0 N	86 50.0 W	.....	.....	26.8	27.3	25.2	10	SE	.....	3	.....	3	.....	
2 81	11 1050	22 20.0 N	86 45.0 W	36.49	14	27.0	27.2	25.2	10	SE	.....	3	.....	3	.....	
2 82	11 1200	22 20.0 N	86 46.0 W	.....	.....	27.0	27.2	24.2	10	SE	.....	3	.....	3	.....	
2 83	11 1300	22 20.0 N	86 46.0 W	.....	.....	26.6	27.3	24.2	10	E	.....	4	.....	4	.....	
2 84	11 1345	22 20.0 N	86 46.0 W	36.79	11	26.8	28.0	24.0	10	E	.....	4	.....	4	.....	
2 85	11 1500	22 20.0 N	86 46.0 W	.....	.....	26.8	27.4	25.2	10	E	.....	4	.....	4	.....	
2 86	11 1600	22 22.0 N	86 31.0 W	.....	.....	27.4	28.0	24.8	12	E	.....	5	.....	5	.....	
2 87	11 1700	22 25.0 N	86 23.0 W	.....	.....	27.3	27.8	24.8	12	E	.....	5	.....	5	.....	
2 88	11 1800	22 22.0 N	86 17.0 W	.....	.....	27.6	28.0	24.8	12	E	.....	5	.....	5	.....	
2 89	11 1900	22 28.0 N	86 12.0 W	36.73	08	27.5	28.0	25.8	12	E	.....	5	.....	5	.....	
2 90	11 2000	22 36.0 N	86 10.0 W	.....	.....	27.5	27.6	24.8	1	NW	.....	2	.....	2	.....	
2 91	11 2100	22 40.0 N	86 16.0 W	.....	.....	27.8	27.6	25.2	1	E	.....	3	.....	3	.....	

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUM NUM	DAY	TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A HG/M3	AIR TEMP C	DEW TEMP C	WIND DIR KN	CUR DIR KN	WIND DIR KN	CUR DIR KN	PHIS STA TEMP C	STA STA FT	REMARKS
2 92	11	2200	22 40.0 N	86 27.0 W	•••••	•••••	27.1	27.4	25.2	10	E	••••	3	••••	3	••••
2 93	11	2300	22 47.0 N	86 40.0 W	•••••	•••••	26.8	26.8	25.7	10	E	••••	3	••••	3	••••
2 94	12	0	22 58.0 N	86 50.0 W	•••••	•••••	26.6	26.6	25.7	9	E	••••	2	••••	2	••••
2 95	12	100	23 05.0 N	86 55.0 W	•••••	•••••	26.6	26.6	25.7	9	E	••••	2	••••	2	••••
2 96	12	200	23 11.0 N	87 00.0 W	•••••	•••••	26.6	26.6	25.7	9	E	••••	1	••••	1	••••
2 97	12	300	23 15.0 N	87 10.0 W	•••••	•••••	26.5	26.5	25.7	9	E	••••	1	••••	1	••••
2 98	12	400	23 15.0 N	87 10.0 W	•••••	•••••	26.5	26.5	25.7	9	E	••••	1	••••	1	••••
2 99	12	500	23 09.0 N	87 02.0 W	38.46	•05	26.4	26.2	25.1	9	SE	••••	1	••••	1	••••
2 100	12	600	22 56.0 N	87 02.0 W	•••••	•••••	26.4	26.2	25.1	9	SE	••••	1	••••	1	••••
2 101	12	700	23 00.0 N	87 04.0 W	•••••	•••••	26.4	26.4	25.7	8	NE	••••	1	••••	1	••••
2 102	12	800	23 03.0 N	87 06.0 W	•••••	•••••	26.6	27.2	25.2	9	E	••••	3	••••	3	••••
2 103	12	900	23 05.0 N	87 12.0 W	•••••	•••••	26.5	27.2	25.2	9	E	••••	3	••••	3	••••
2 104	12	1000	23 08.1 N	87 16.0 W	37.01	•11	26.6	27.0	24.0	11	S	••••	4	••••	4	••••
2 105	12	1100	23 13.0 N	87 22.0 W	•••••	•••••	26.5	27.6	24.0	11	SE	••••	5	••••	5	••••
2 106	12	1200	23 17.0 N	87 26.0 W	•••••	•••••	26.7	27.2	24.0	11	SE	••••	5	••••	5	••••

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA	SAMP	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATER	AIR	DEW	WIND	WIND	SEA	SEA	PHM
NUM	NUM		EDT			PTS/K	PHY A MG/M3	TEMP C	TEMP C	POINT C	SPD KN	DIR KN	DIR FT	TEMP C	TEMP C
2	107	12	1300	23 19.0 N	87 27.0 W	00000	00000	26.7	26.6	25.7	10	SE	0000	4	0000
2	108	12	1400	23 19.0 N	87 27.0 W	00000	00000	26.7	27.0	25.2	10	SE	0000	4	0000
2	109	12	1400	23 19.0 N	87 27.0 W	00000	00000	26.7	27.0	25.2	10	SE	0000	4	0000
2	109	12	1500	23 22.0 N	87 23.0 W	00000	00000	27.0	27.0	26.2	13	E	0000	4	0000
2	110	12	1600	23 25.0 N	87 17.0 W	00000	00000	26.9	27.0	26.2	13	E	0000	4	0000
2	111	12	1700	23 32.0 N	87 09.0 W	00000	00000	26.7	27.1	26.2	11	E	0000	3	0000
2	112	12	1800	23 32.0 N	87 09.0 W	00000	00000	26.5	27.4	26.2	13	E	0000	3	0000
2	113	12	1900	23 33.0 N	87 09.0 W	38.05	00000	26.8	27.2	26.2	13	E	0000	3	0000
2	114	12	2000	23 35.0 N	87 06.0 W	00000	00000	26.6	27.4	26.2	10	E	0000	3	0000
2	115	12	2100	23 37.0 N	87 02.0 W	00000	00000	26.6	26.6	25.7	16	NE	0000	3	0000
2	116	12	2200	23 39.0 N	86 56.0 W	00000	00000	26.6	26.6	24.7	12	E	0000	4	0000
2	117	12	2300	23 40.0 N	86 52.0 W	00000	00000	26.6	26.5	25.7	13	E	0000	3	0000
2	118	13	0	23 42.0 N	86 46.0 W	00000	00000	26.5	26.5	24.7	12	E	0000	4	0000
2	119	13	100	23 46.0 N	83 40.0 W	00000	00000	26.3	26.6	24.7	14	E	0000	6	0000
2	120	13	200	23 48.0 N	86 35.0 W	00000	00000	26.6	26.6	24.6	22	E	0000	9	0000

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUM Numb	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR	AIR	DEM	WIND	CUR	CUR	PHTS	SEA		
PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	PTS/K	
2 121	13	300	23 50.0 N	06 30.0 W	•••••	•••••	26.6	26.7	20 SE	•••••	9	•••••	9	•••••	9	
2 122	13	400	23 52.0 N	06 25.0 W	•••••	•••••	•••••	•••••	20 SE	•••••	9	•••••	9	•••••	9	
2 123	13	500	23 55.0 N	06 20.0 W	•••••	•••••	•••••	•••••	20 SE	•••••	9	•••••	9	•••••	9	
2 124	13	600	23 56.0 N	06 14.0 W	•••••	•••••	•••••	•••••	10 SE	•••••	9	•••••	9	•••••	9	
2 125	13	700	23 58.0 N	06 09.0 W	•••••	•••••	26.8	26.8	18 SE	•••••	9	•••••	9	•••••	9	
2 126	13	800	24 01.0 N	05 59.0 W	•••••	•••••	27.7	26.9	24.7	14 SE	•••••	9	•••••	9	•••••	9
2 127	13	900	24 08.0 N	06 00.0 W	•••••	•••••	26.5	26.5	25.7	12 SE	•••••	7	•••••	7	•••••	7
2 128	13	1000	24 15.0 N	05 05.7 W	•••••	•••••	26.7	26.8	25.7	12 SE	•••••	7	•••••	7	•••••	7
2 129	13	1100	24 20.0 N	05 54.0 W	•••••	•••••	26.8	27.1	25.4	14 SE	•••••	7	•••••	7	•••••	7
2 130	13	1200	24 22.0 N	05 45.0 W	•••••	•••••	26.8	27.3	25.2	15 SE	•••••	7	•••••	7	•••••	7
2 131	13	1300	24 25.0 N	05 36.0 W	•••••	•••••	26.8	27.2	25.2	14 SE	•••••	7	•••••	7	•••••	7
2 132	13	1400	24 28.0 N	05 31.0 W	•••••	•••••	27.0	27.4	25.2	14 SE	•••••	7	•••••	7	•••••	7
2 133	13	1500	24 28.0 N	05 27.0 W	•••••	•••••	27.0	27.4	25.2	12 SE	•••••	5	•••••	5	•••••	5
2 134	13	1600	24 30.0 N	05 20.0 W	•••••	•••••	27.1	27.5	22.6	12 SE	•••••	4	•••••	4	•••••	4
2 135	13	1700	24 32.0 N	05 12.0 W	•••••	•••••	27.5	27.5	23.8	10 SE	•••••	4	•••••	4	•••••	4

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA STAMP NUM NUM	DAY TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR PHY A PIS/K MG/M3	ATM TEMP C	DEW TEMP C	WIND DIR KN	CUR KN	SEA DIR FT	PHB STA TEMP C	REMARKS
2 134	13 1800	24 33.0 N	05 03.0 W	00000	00000	27.4	27.5	2208	10	SE	0000	0000 LUNAN
2 137	13 1900	24 35.0 N	04 58.0 W	00000	00000	27.6	27.6	2206	10	SE	0000	0000 ESTIMATED POS
2 138	13 2000	24 38.0 N	04 54.0 W	00000	00000	27.9	27.4	2202	10	SE	0000	0000 ESTIMATED POS
2 139	13 2100	24 38.0 N	04 46.0 W	00000	00000	27.6	27.3	2202	12	SE	0000	0000 ESTIMATED POS
2 140	13 2200	24 39.0 N	04 38.0 W	00000	00000	27.7	27.4	2302	12	SE	0000	0000 ESTIMATED POS
2 141	13 2300	24 39.0 N	04 35.0 W	00000	00000	27.8	27.0	2302	14	SE	0000	0000 ESTIMATED POS
2 142	14 0	24 40.0 N	04 22.0 W	00000	00000	27.8	27.0	2302	10	SE	0000	0000 ESTIMATED POS
2 143	14 100	24 40.0 N	04 14.0 W	00000	00000	27.8	27.0	2302	17	SE	0000	0000 ESTIMATED POS
2 144	14 200	24 41.0 N	04 00.0 W	00000	00000	27.9	26.6	2307	18	SE	0000	0000 ESTIMATED POS
2 145	14 300	24 41.0 N	03 58.0 W	00000	00000	27.7	26.6	2307	17	SE	0000	0000 ESTIMATED POS
2 146	14 400	24 42.0 N	03 50.0 W	00000	00000	27.9	26.9	2307	14	SE	0000	0000 ESTIMATED POS
2 147	14 500	24 42.0 N	03 42.0 W	00000	00000	27.8	26.9	2307	12	SE	0000	0000 ESTIMATED POS
2 148	14 600	24 43.0 N	03 39.0 W	00000	00000	27.6	26.4	2307	12	SE	0000	0000 LUNAN
2 149	14 700	24 43.0 N	03 36.0 W	00000	00000	27.3	26.4	2307	12	SE	0000	0000 LUNAN
2 150	14 800	24 46.0 N	03 35.0 W	00000	00000	27.2	26.4	2307	12	SE	0000	0000 LUNAN

TABLE 2
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUMB	SAMP TIME	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLON	WATR PH A	AIR TEMP C	DEM PONI C	WIND SPD KN	WIND DIR KN	CUR DIR KN	SEA STA FT	SEA TEMP C	REMARKS	
EDT	PTS/K	PTS/HJ	PTS/K														
2 151	14 900	24 51.0 N	03 35.0 W	•••••	•••••	•••••	27.3	26.6	23.07	10	SE	••••	4	••••	4	LURAN	
2 152	14 1000	24 55.0 N	03 29.0 W	•••••	•••••	•••••	27.4	26.6	23.07	10	SE	••••	3	••••	3	LURAN	
2 153	14 1100	24 59.0 N	03 23.0 W	•••••	•••••	•••••	27.2	26.6	23.07	10	E	••••	3	••••	3	LURAN	
2 154	14 1200	25 00.0 N	03 22.0 W	•••••	•••••	•••••	26.9	26.6	23.07	10	E	••••	3	••••	3	LURAN	
2 155	14 1300	25 03.0 N	03 18.0 W	•••••	•••••	•••••	26.5	26.4	23.07	10	E	••••	3	••••	3	LURAN	
2 156	14 1400	25 06.0 N	03 14.0 W	•••••	•••••	•••••	26.4	26.5	22.07	10	E	••••	2	••••	2	ESTIMATED PUS	
2 157	14 1500	25 08.0 N	03 07.0 W	•••••	•••••	•••••	26.6	26.4	22.07	10	E	••••	2	••••	2	LURAN	

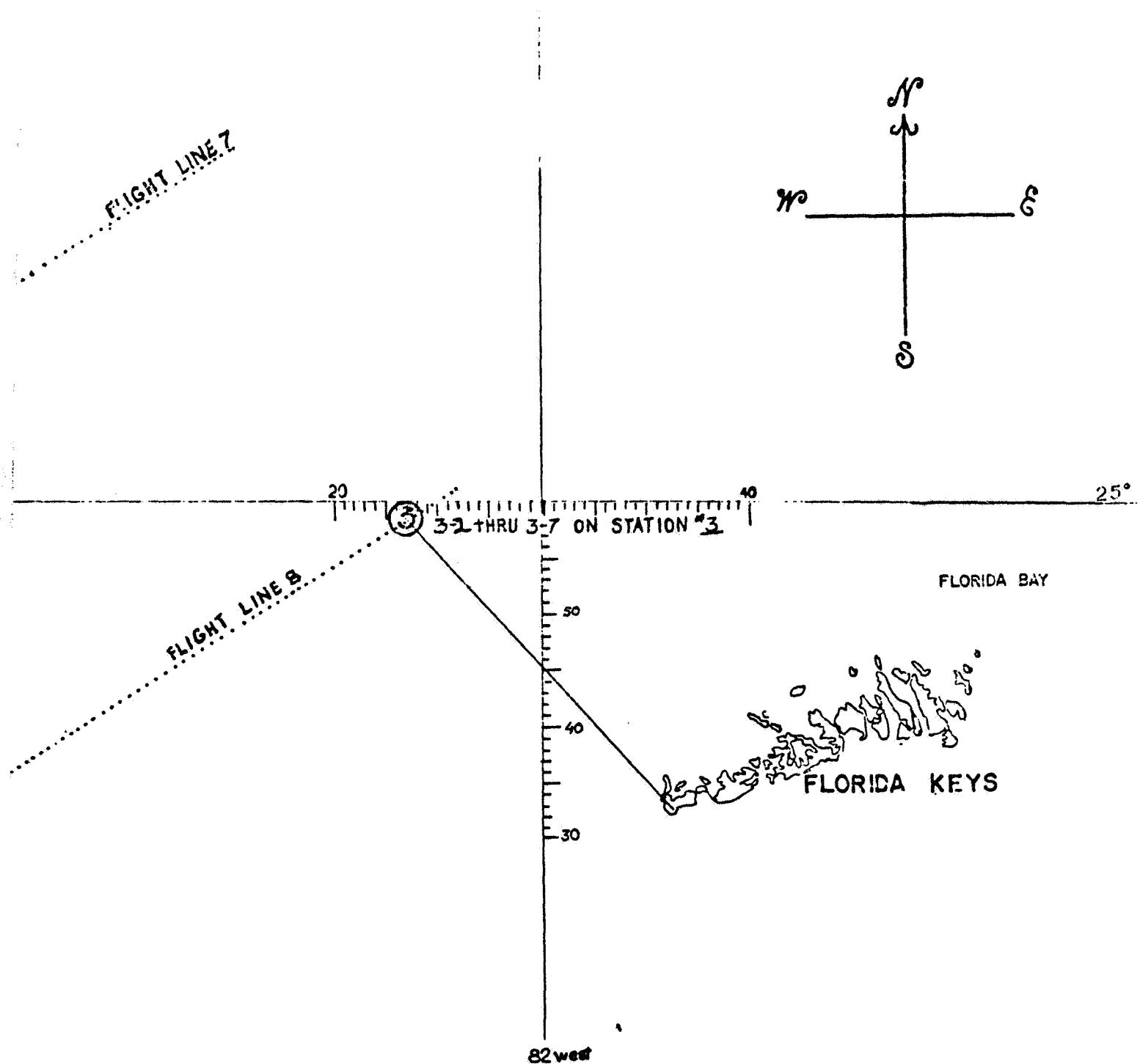


FIGURE 4. BOAT TRACK OF THE RISTTODA M
NUMBERS REFER TO OBSERVATIONS

TABLE J
SHIPBOARD SURFACE MEASUREMENTS

TA SAMP UM NUMBER	DAY	TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR	WATER PH V A HG/M3	AIR TEMP C	DEW TEMP C	WIND SPD KN	WIND DIR KN	CUR DIR KN	SEA HT SI	WIND DIR F1	REMARKS
3	1	12 000	•••••	•••••	26.5	26.9	23.1	15	E	•••••	3	•••••	10 MI OUT		
3	2	12 900	24 58.5 N	82 13.3 W	•••••	•••••	26.5	27.5	23.2	15	E	•19	90	3	••••• STATION 3
3	3	12 1004	24 58.5 N	82 13.3 W	38.13	•23	26.5	29.0	22.2	15	E	•19	90	3	••••• STATION 3
3	4	12 1100	24 58.5 N	82 13.3 W	•••••	•••••	26.5	28.9	22.2	15	E	•19	90	2	••••• STATION 3
3	5	12 1200	24 58.5 N	82 13.3 W	•••••	•••••	26.5	29.0	22.2	15	E	•19	90	2	••••• STATION 3
3	6	13 1000	24 58.5 N	82 13.3 W	•••••	•••••	25.8	28.4	23.4	15	E	•27	90	4	••••• STATION 3
3	7	13 1100	24 58.5 N	82 13.3 W	38.13	•11	26.2	28.4	23.2	15	E	•27	90	4	••••• STATION 3

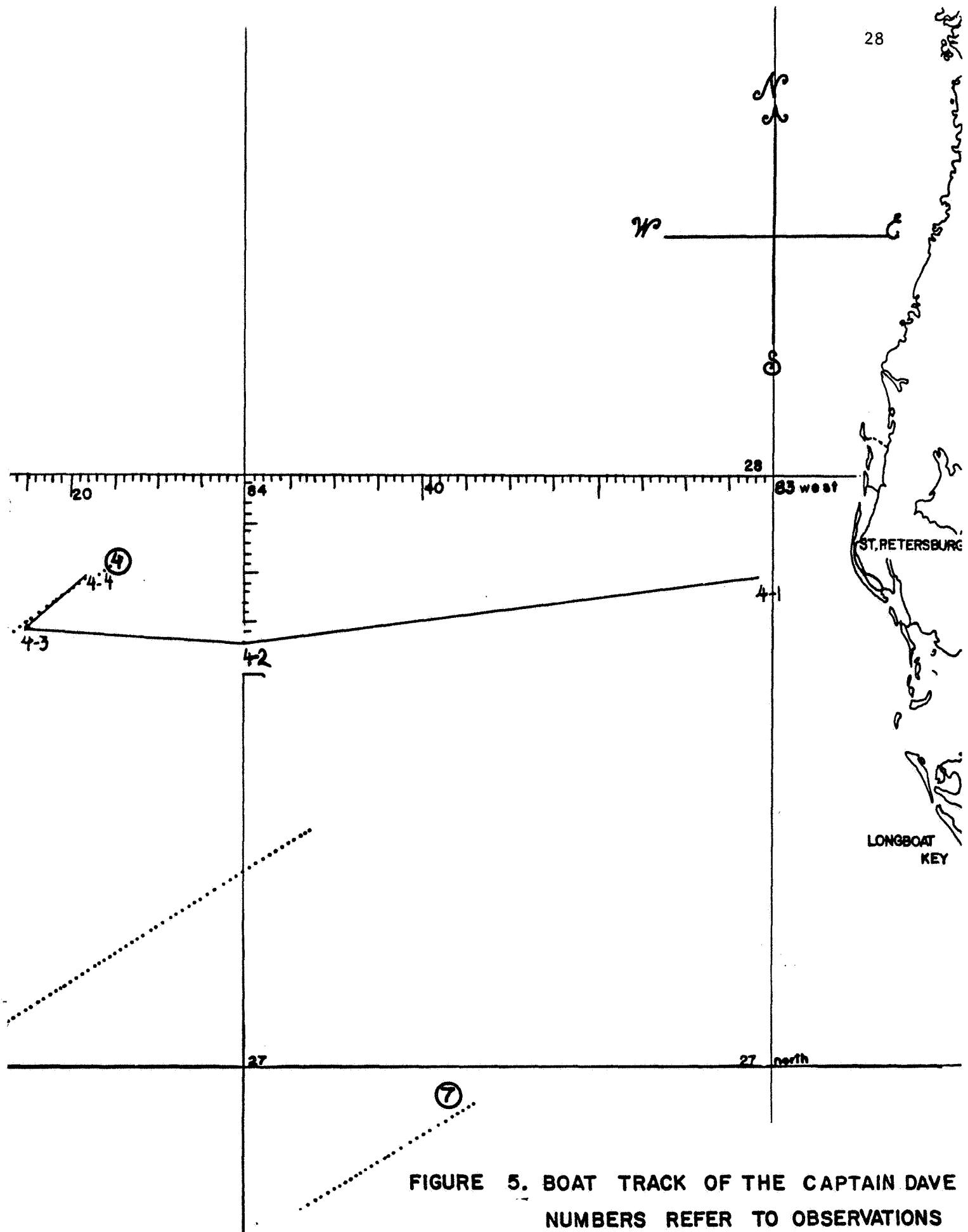


FIGURE 5. BOAT TRACK OF THE CAPTAIN DAVE
NUMBERS REFER TO OBSERVATIONS

TABLE 4
SHIPBOARD SURFACE MEASUREMENTS

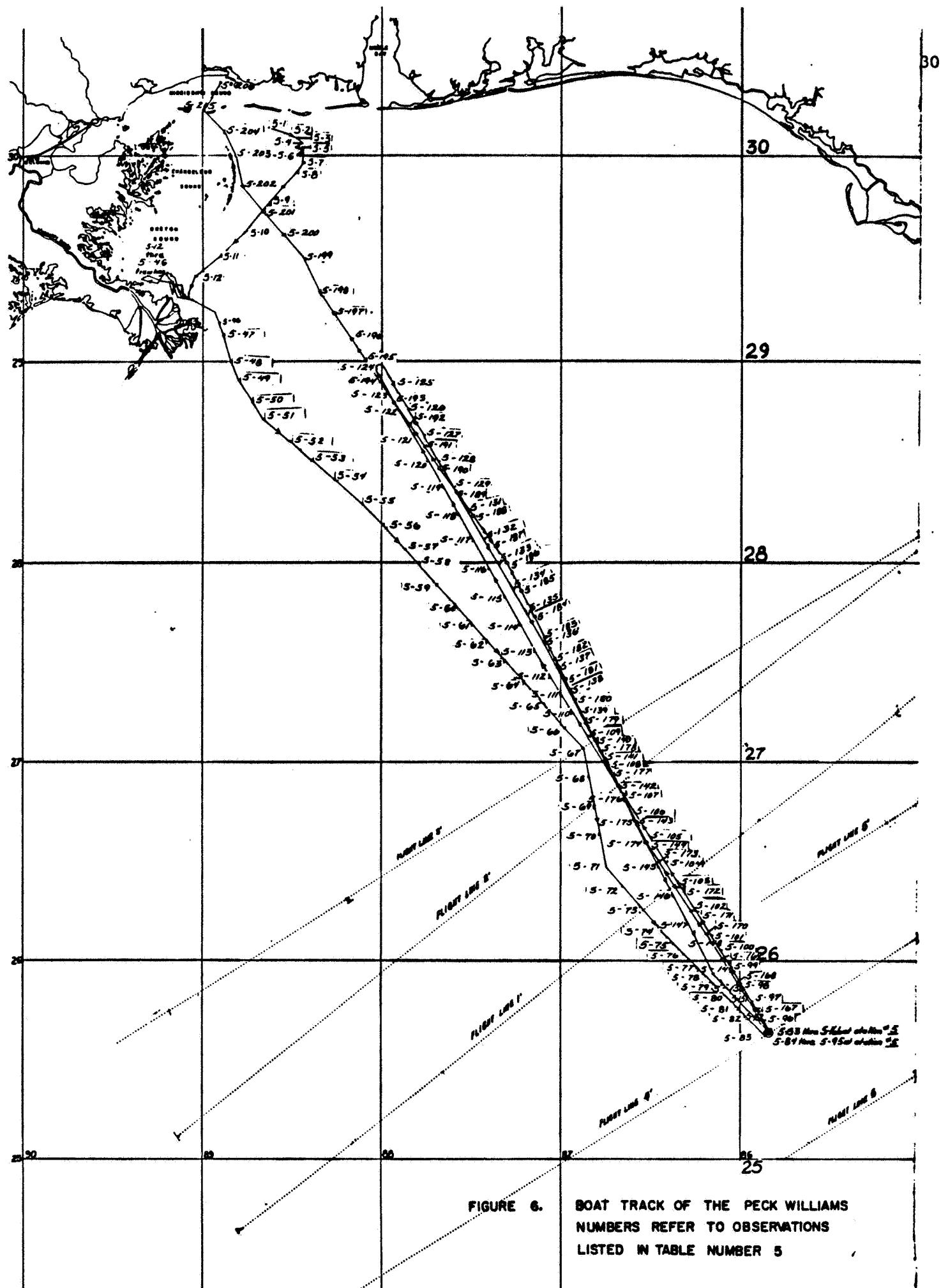


FIGURE 6.

BOAT TRACK OF THE PECK WILLIAMS
NUMBERS REFER TO OBSERVATIONS
LISTED IN TABLE NUMBER 5

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA SAMP NUM NUM	DAY TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A HG/M3	WATR TEMP C	AIR TEMP C	DEW POINT C	WIND DIR KN	CUR DIR KN	STA DIR FT	PHTS STA TEMP C	REMARKS
5 1	5 1930	30 08.0 N	88 90.4 W	•••••	•••••	•••••	23.4	22.8	14.8	•••••	•••••	•••••	•••••	•••••
5 2	5 2030	30 07.0 N	88 31.5 W	•••••	•••••	•••••	22.8	22.2	10.2	•••••	•••••	•••••	•••••	•••••
5 3	5 2200	30 06.5 N	88 28.5 W	•••••	•••••	•••••	22.8	22.2	14.2	•••••	•••••	•••••	•••••	•••••
5 4	5 2300	30 05.5 N	88 27.0 W	•••••	•••••	•••••	22.7	22.2	14.2	•••••	•••••	•••••	•••••	•••••
5 5	6 0	30 02.5 N	88 29.0 W	•••••	•••••	•••••	22.7	22.2	14.2	•••••	•••••	•••••	•••••	•••••
5 6	6 100	30 02.4 N	87 26.5 W	•••••	•••••	•••••	22.8	22.2	15.2	•••••	•••••	•••••	•••••	•••••
5 7	6 200	29 57.5 N	88 26.7 W	•••••	•••••	•••••	22.8	22.2	15.2	•••••	•••••	•••••	•••••	•••••
5 8	6 300	29 55.0 N	88 29.0 W	•••••	•••••	•••••	22.0	22.0	16.0	•••••	•••••	•••••	•••••	•••••
5 9	6 400	29 46.4 N	88 38.0 W	•••••	•••••	•••••	22.0	22.0	16.0	•••••	•••••	•••••	•••••	•••••
5 10	6 500	29 38.0 N	88 46.0 W	•••••	•••••	•••••	22.0	22.0	17.0	•••••	•••••	•••••	•••••	•••••
5 11	6 500	29 30.5 N	88 54.2 W	•••••	•••••	•••••	22.2	22.8	16.8	•••••	•••••	•••••	•••••	•••••
5 12	6 700	29 24.6 N	89 03.5 W	•••••	•••••	•••••	22.5	22.8	17.0	•••••	•••••	•••••	•••••	•••••
5 13	6 800	29 20.2 N	89 05.0 W	•••••	•••••	•••••	22.4	22.0	17.0	•••••	•••••	•••••	•••••	•••••
5 14	6 900	29 19.5 N	89 06.5 W	•••••	•••••	•••••	21.5	23.3	19.3	•••••	•••••	•••••	•••••	•••••
5 15	6 1000	29 22.0 N	89 07.2 W	•••••	•••••	•••••	21.6	23.8	20.9	•••••	•••••	•••••	•••••	•••••

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA	SAHP	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLON	WATR	AIR	DEM	WIND	MIND	CUR	DIR	STA	PHS
NUM	NUM		EDT			PTS/K	PTS/K	PH	TEMP	POINT	SPD	DIR	KN	FT	TEMP	C
						HG/HJ	C	C	C	C						
5	16	6	1100	29 22.2 N	89 09.2 W	•••••	•••••	22.6	24.4	21.4	•••••	•••••	•••••	•••••	•••••	•••••
5	17	6	1200	29 19.5 N	89 10.5 W	•••••	•••••	22.2	24.4	20.4	•••••	•••••	•••••	•••••	•••••	•••••
5	18	6	1300	29 26.2 N	89 13.0 W	•••••	•••••	22.3	25.5	20.6	•••••	•••••	•••••	•••••	•••••	•••••
5	19	6	1400	29 24.5 N	89 09.5 W	•••••	•••••	22.3	26.1	21.1	•••••	•••••	•••••	•••••	•••••	•••••
5	20	6	1500	29 20.2 N	89 08.2 W	•••••	•••••	22.4	26.1	21.1	•••••	•••••	•••••	•••••	•••••	•••••
5	21	6	1600	29 18.5 N	89 07.7 W	•••••	•••••	23.4	24.9	21.0	•••••	•••••	•••••	•••••	•••••	•••••
5	22	6	1700	29 18.5 N	89 05.5 W	•••••	•••••	23.0	24.9	21.0	•••••	•••••	•••••	•••••	•••••	•••••
5	23	6	1800	29 26.2 N	89 13.0 W	•••••	•••••	23.0	24.9	21.0	•••••	•••••	•••••	•••••	•••••	•••••
5	24	6	1900	29 23.0 N	89 15.0 W	•••••	•••••	23.0	24.9	21.0	•••••	•••••	•••••	•••••	•••••	•••••
5	25	6	2000	29 23.2 N	89 17.5 W	•••••	•••••	23.1	24.9	21.0	•••••	•••••	•••••	•••••	•••••	•••••
5	26	6	2100	29 20.0 N	89 20.1 W	•••••	•••••	23.4	24.9	21.0	•••••	•••••	•••••	•••••	•••••	•••••
5	27	6	2200	29 20.0 N	89 20.1 W	•••••	•••••	23.0	24.4	20.4	•••••	•••••	•••••	•••••	•••••	•••••
5	28	6	2300	29 20.0 N	89 20.1 W	•••••	•••••	23.0	23.8	20.9	•••••	•••••	•••••	•••••	•••••	•••••
5	29	7	0	29 20.0 N	89 20.1 W	•••••	•••••	22.9	23.3	21.3	•••••	•••••	•••••	•••••	•••••	•••••
5	30	7	100	29 20.0 N	89 20.1 W	•••••	•••••	22.8	23.3	21.3	•••••	•••••	•••••	•••••	•••••	•••••

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA	SAMP	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR	AIR	DEM	WIND	WIND	CUR	SEA	PWTS
NUM	NUM		EDT			PTS/K	PHY A	TEMP	TEMP	PONT	SPD	DIR	DIR	STA	TEMP
							MG/M3	C	C	KN	KN			FT	C
5	31	7	400	29 20.0 N	89 20.1 W	•••••	•••••	22.6	22.8	21.8	•••••	•••••	•••••	•••••	•••••
5	36	7	700	29 20.4 N	89 20.1 W	•••••	•••••	22.5	23.3	21.5	•••••	•••••	•••••	•••••	•••••
5	38	7	900	29 23.5 N	89 20.2 W	•••••	•••••	23.0	23.3	22.3	•••••	•••••	•••••	•••••	•••••
5	39	7	1000	29 25.0 N	89 18.5 W	•••••	•••••	21.3	23.8	22.9	•••••	•••••	•••••	•••••	•••••
5	40	7	1100	29 24.0 N	89 15.2 W	•••••	•••••	22.9	24.4	23.4	•••••	•••••	•••••	•••••	•••••
5	41	7	1200	29 23.1 N	89 14.0 W	•••••	•••••	23.0	24.4	23.6	•••••	•••••	•••••	•••••	•••••
5	42	7	1300	29 22.5 N	89 10.5 W	•••••	•••••	23.0	24.1	24.1	•••••	•••••	•••••	•••••	•••••
5	43	7	1400	29 18.7 N	89 08.2 W	•••••	•••••	23.6	24.4	23.4	•••••	•••••	•••••	•••••	•••••
5	44	7	1500	29 16.0 N	89 07.9 W	•••••	•••••	23.5	24.4	23.4	•••••	•••••	•••••	•••••	•••••
5	45	7	1600	29 17.8 N	89 03.5 W	•••••	•••••	23.5	25.5	22.6	•••••	•••••	•••••	•••••	•••••
5	46	7	1700	29 15.0 N	89 56.5 W	•••••	•••••	23.9	25.5	22.6	•••••	•••••	•••••	•••••	•••••
5	47	7	1800	29 08.0 N	88 53.5 W	•••••	•••••	23.7	24.9	24.0 U	•••••	•••••	•••••	•••••	•••••
5	48	7	1900	29 00.0 N	88 51.2 W	•••••	•••••	24.2	25.5	23.6	•••••	•••••	•••••	•••••	•••••
5	49	7	2000	28 54.8 N	88 48.5 W	•••••	•••••	23.7	25.5	23.6	•••••	•••••	•••••	•••••	•••••
5	50	7	2100	28 54.2 N	88 43.6 W	•••••	•••••	23.8	25.5	23.6	•••••	•••••	•••••	•••••	•••••

TABLE 3
SHIPBOARD SURFACE MEASUREMENTS

STA	SAMP NUM NUM	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A HGT/H3	WATR TEMP C	AIR TEMP C	WIND DIR KN	WIND SPD KN	CUR DIR KN	CUR SPD FT SEC	SEA DIR FT SEC	PNTS TEMP C	REMARKS
5	51	7	2200	28 43.0 N	68 39.5 W	35.26	00000	00000	23.4	25.5	23.6	0000	0000	0000	0000	0000	0000
5	52	7	2300	28 36.0 N	68 31.0 W	35.26	00000	00000	23.3	25.5	23.6	0000	0000	0000	0000	0000	0000
5	53	8	0	28 31.0 N	68 23.5 W	35.26	00000	00000	23.3	25.5	23.6	0000	0000	0000	0000	0000	0000
5	54	8	100	28 24.2 N	68 15.7 W	35.26	00000	00000	23.5	25.5	23.6	0000	0000	0000	0000	0000	0000
5	55	8	200	28 17.0 N	68 06.0 W	35.26	00000	00000	23.7	25.5	22.6	0000	0000	0000	0000	0000	0000
5	56	8	300	28 10.5 N	67 56.0 W	36.60	052	24.2	25.5	23.6	0000	0000	0000	0000	0000	0000	
5	57	8	400	28 04.0 N	67 52.0 W	36.60	00000	00000	24.5	25.5	23.6	0000	0000	0000	0000	0000	0000
5	58	8	500	27 59.0 N	67 47.0 W	36.60	00000	00000	24.5	24.9	24.0	0000	0000	0000	0000	0000	0000
5	59	8	600	27 54.0 N	67 41.5 W	36.60	00000	00000	24.4	24.9	24.0	0000	0000	0000	0000	0000	0000
5	60	8	700	27 47.2 N	67 35.0 W	36.60	00000	00000	24.5	26.1	23.1	0000	0000	0000	0000	0000	0000
5	61	8	800	27 42.5 N	67 30.0 W	36.42	00000	00000	24.5	26.1	23.1	0000	0000	0000	0000	0000	0000
5	62	8	900	27 37.5 N	67 25.0 W	36.42	00000	00000	25.2	26.7	23.7	0000	0000	0000	0000	0000	0000
5	63	8	1000	27 30.2 N	67 18.0 W	36.53	016	25.7	27.3	24.2	0000	0000	0000	0000	0000	0000	
5	64	8	1100	27 25.0 N	67 12.0 W	36.53	00000	00000	26.3	27.9	24.0	0000	0000	0000	0000	0000	0000
5	65	8	1200	27 18.0 N	67 05.0 W	36.53	00000	00000	26.2	27.9	23.6	0000	0000	0000	0000	0000	0000

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA	SAMP	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLON	WATR PHY A PTS/K	WATR PHY B NG/H3	AIR TEMP C	TEMP C	DEW POINT C	SPD KN	WIND DIR	CUR WIR	SEA STA FT	PHIS STA TEMP C	REMARKS
5	64	8	1300	27 10.0 N	86 58.0 W	•••••	•••••	24.2	24.2	27.9	27.9	23.8	••••	••••	••••	••••	••••	
5	67	8	1400	27 04.0 N	86 51.2 W	36.48	••••	24.5	24.5	27.9	27.9	23.8	••••	••••	••••	••••	••••	
5	68	8	1500	26 56.0 N	86 50.0 W	•••••	•••••	24.5	24.5	27.4	27.4	23.8	••••	••••	••••	••••	••••	
5	69	8	1600	26 46.2 N	86 48.0 W	•••••	•••••	24.5	24.5	27.9	27.9	23.8	••••	••••	••••	••••	••••	
5	70	8	1700	26 37.5 N	86 46.5 W	•••••	•••••	24.7	24.7	27.9	27.9	23.8	••••	••••	••••	••••	••••	
5	71	8	1800	26 28.0 N	86 44.0 W	34.30	••••	26.5	26.5	27.9	27.9	23.8	••••	••••	••••	••••	••••	CROSSED FL 3
5	72	8	1900	26 22.5 N	86 39.0 W	•••••	•••••	26.5	26.5	27.3	27.3	24.2	••••	••••	••••	••••	••••	
5	73	8	2000	26 16.5 N	86 33.0 W	•••••	•••••	26.9	26.9	27.3	27.3	24.2	••••	••••	••••	••••	••••	
5	74	8	2100	26 08.5 N	86 25.0 W	•••••	•••••	26.5	26.5	26.7	26.7	25.7	••••	••••	••••	••••	••••	
5	75	8	2200	26 05.0 N	86 21.2 W	•••••	•••••	26.4	26.4	26.1	26.1	25.1	••••	••••	••••	••••	••••	
5	76	8	2300	26 02.0 N	86 18.0 W	34.31	••••	26.0	26.0	25.5	25.5	24.8	••••	••••	••••	••••	••••	
5	77	9	0	25 57.5 N	86 13.0 W	•••••	•••••	26.5	26.5	26.1	26.1	24.1	••••	••••	••••	••••	••••	
5	78	9	100	25 55.0 N	86 10.5 W	•••••	•••••	26.4	26.4	26.1	26.1	25.1	••••	••••	••••	••••	••••	
5	79	9	200	25 53.0 N	86 08.0 W	•••••	•••••	26.5	26.5	25.5	25.5	24.6	••••	••••	••••	••••	••••	
5	80	9	300	25 49.5 N	86 04.5 W	•••••	•••••	26.5	26.5	25.5	25.5	24.6	••••	••••	••••	••••	••••	

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA	SAMP	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A	WATR Hg/m3	ATM TEMP C	DEW TEMP C	PONI	DIR	WIND SPD KN	CUN	CUR DIR	SLA Ft	PHTS STA TEMP C	REMARKS
5	81	9	400	25 45.0 N	86 00.0 W	•••••	•••••	24.3	26.1	26.1	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	
5	82	9	500	25 41.0 N	85 55.5 W	•••••	•••••	24.3	26.1	26.1	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	
5	83	9	600	25 38.5 N	85 51.3 W	•••••	•••••	24.4	26.1	26.1	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	
5	84	9	700	25 38.0 N	85 49.0 W	•••••	•••••	24.2	26.7	23.1	7	58	•••••	•••••	20	•••••	•••••	•••••	
5	85	9	800	25 38.0 N	85 49.0 W	•••••	•••••	26.0	26.8	24.1	7	5	•••••	•••••	20	•••••	•••••	•••••	
5	86	9	900	25 38.0 N	85 49.0 W	•••••	•••••	26.2	26.7	24.7	7	5	•••••	240	20	•••••	•••••	•••••	
5	87	9	1000	25 38.0 N	85 49.0 W	•••••	•••••	26.3	27.5	23.6	7	5	•••••	240	20	•••••	•••••	•••••	
5	88	9	1100	25 38.0 N	85 49.0 W	•••••	•••••	26.3	27.9	23.3	7	5	•••••	240	20	•••••	•••••	•••••	
5	89	9	1200	25 38.0 N	85 49.0 W	•••••	•••••	26.5	28.3	23.4	7	5	•••••	240	20	•••••	•••••	•••••	
5	90	9	1300	25 38.0 N	85 49.0 W	•••••	•••••	26.7	30.5	23.0	7	5	•••••	200	20	•••••	•••••	•••••	
5	91	9	1323	25 38.0 N	85 49.0 W	•••••	•••••	26.8	30.0	22.0	7	5	•••••	200	20	•••••	•••••	•••••	
5	92	9	1400	25 38.0 N	85 49.0 W	•••••	•••••	27.4	30.0	23.0	7	5	•••••	200	20	•••••	•••••	•••••	
5	93	9	1500	25 38.0 N	85 49.0 W	•••••	•••••	27.5	29.5	23.4	7	5	•••••	20	•••••	•••••	•••••		
5	94	9	1600	25 38.0 N	85 49.0 W	•••••	•••••	27.5	29.5	23.4	7	5	•••••	20	•••••	•••••	•••••		
5	95	9	1630	25 38.0 N	85 49.0 W	•••••	•••••	27.5	29.5	23.4	7	5	•••••	20	•••••	•••••	•••••		

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUM NUM	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOK	WATR	AIR	DEW	MIND	CUR	SEA	PHLs	REMARKS
PTS/K	EDT	HG/H3	TEMP C	TEMP C	SPD KN	DIR KN	DIR KN	STW F1	STW F1	TEMP C				
5 96	9 1730	25 41.5 N	85 51.0 W	•••••	•••••	26.6	27.3	22.2	••••	••••	••••	••••	••••	••••
5 97	9 1800	25 46.0 N	85 55.5 W	•••••	•••••	26.2	26.1	21.1	••••	••••	••••	••••	••••	••••
5 98	9 1900	25 32.5 N	85 59.5 W	•••••	•••••	25.7	24.9	21.0	••••	••••	••••	••••	••••	••••
5 99	9 2000	25 58.5 N	86 04.2 W	•••••	•••••	25.9	25.5	20.6	••••	••••	••••	••••	••••	••••
5 100	9 2100			•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
5 101	9 2200	26 08.0 N	86 09.2 W	36.18	•04	25.6	24.4	19.4	••••	••••	••••	••••	••••	••••
5 102	9 2300	26 15.0 N	86 14.5 W	•••••	•••••	24.9	24.4	19.4	••••	••••	••••	••••	••••	••••
5 103	10 0	26 23.2 N	86 19.5 W	•••••	•••••	25.8	24.9	20.0	••••	••••	••••	••••	••••	••••
5 104	10 100	26 29.0 N	86 24.0 W	•••••	•••••	25.6	24.9	20.0	••••	••••	••••	••••	••••	••••
5 105	10 200	26 37.0 N	86 29.2 W	37.01	•09	25.5	25.5	20.6	••••	••••	••••	••••	••••	••••
5 106	10 300	26 44.1 N	86 35.0 W	•••••	•••••	25.5	25.5	20.6	••••	••••	••••	••••	••••	••••
5 107	10 400	26 51.8 N	86 39.5 W	•••••	•••••	25.4	24.9	20.0	••••	••••	••••	••••	••••	••••
5 108	10 500	27 00.0 N	86 45.0 W	•••••	•••••	25.7	24.9	21.0	••••	••••	••••	••••	••••	••••
5 109	10 600	27 06.0 N	86 51.0 W	36.84	•06	25.8	24.9	21.0	••••	••••	••••	••••	••••	••••
5 110	10 700	27 14.0 N	86 55.0 W	•••••	•••••	26.0	24.9	21.0	••••	••••	••••	••••	••••	••••

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUM NUM	SAMP TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A HG/H3	AIR TEMP C	DEW POINT C	WIND DIR KN	CUR DIR KN	CUR DIR KN	SEA DIR FT	SEA STA TEMP C	NETWORKS
5 126	10 2300	28 46.0 N	87 50.0 W	00000	00000	24.8	24.5	21.0	0000	0000	0000	0000	0000	0000
5 127	11 0	28 38.2 N	87 45.5 W	00000	00000	24.7	24.5	22.0	0000	0000	0000	0000	0000	0000
5 128	11 100	28 30.2 N	87 42.0 W	00000	00000	24.5	24.3	21.4	0000	0000	0000	0000	0000	0000
5 129	11 200	28 22.0 N	87 35.0 W	00000	00000	24.5	24.4	20.4	0000	0000	0000	0000	0000	0000
5 131	11 300	28 15.5 N	87 31.2 W	00000	00000	24.7	24.5	21.4	0000	0000	0000	0000	0000	0000
5 132	11 400	28 07.2 N	87 26.5 W	36.93	0.11	24.6	24.3	21.4	0000	0000	0000	0000	0000	0000
5 133	11 500	28 00.0 N	87 20.0 W	00000	00000	24.6	24.6	21.4	0000	0000	0000	0000	0000	0000
5 134	11 600	27 52.2 N	87 16.2 W	00000	00000	24.5	24.3	21.4	0000	0000	0000	0000	0000	0000
5 135	11 700	27 45.0 N	87 11.2 W	00000	00000	24.4	24.4	21.4	0000	0000	0000	0000	0000	0000
5 136	11 800	27 36.5 N	87 05.5 W	36.38	0.11	25.1	25.5	22.4	0000	0000	0000	0000	0000	0000
5 137	11 900	27 29.5 N	87 02.0 W	00000	00000	25.0	24.5	22.6	0000	0000	0000	0000	0000	0000
5 138	11 1000	27 21.5 N	86 57.5 W	00000	00000	25.1	25.4	21.6	0000	0000	0000	0000	0000	0000
5 139	11 1100	27 14.5 N	86 53.5 W	00000	00000	25.8	26.8	24.6	0000	0000	0000	0000	0000	0000
5 140	11 1200	27 06.5 N	86 49.0 W	36.61	0.11	25.7	26.0	24.1	0000	0000	0000	0000	0000	0000
5 141	11 1300	27 00.0 N	86 44.5 W	00000	00000	25.5	26.2	24.1	0000	0000	0000	0000	0000	0000

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA SAMP NUM NUMB	DAY TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A HG/H3	AIR TEMP C	DEB PONT C	WIND DIR DIN	CUR DIR	SEA STA FT	PNIS TEMP C	REMARKS
5 142	11 1400	26 51.2 N	06 39.7 W	•••••	•••••	26.0	26.7	23.7	•••••	•••••	•••••	•••••	•••••
5 143	11 1500	26 43.5 N	06 35.5 W	•••••	•••••	25.8	26.8	23.7	•••••	•••••	•••••	•••••	•••••
5 144	11 1600	26 35.0 N	06 31.0 W	37.69	-0.00	26.5	26.7	22.7	•••••	•••••	•••••	•••••	•••••
5 145	11 1700	26 28.0 N	06 26.2 W	•••••	•••••	26.5	26.8	22.7	•••••	•••••	•••••	•••••	•••••
5 146	11 1800	26 20.0 N	06 22.0 W	•••••	•••••	26.5	27.9	23.8	•••••	•••••	•••••	•••••	•••••
5 147	11 1900	26 12.0 N	06 18.5 W	•••••	•••••	26.3	27.5	23.2	•••••	•••••	•••••	•••••	•••••
5 148	11 2000	26 04.2 N	06 13.5 W	38.66	+1.3	26.4	26.7	23.7	•••••	•••••	•••••	•••••	•••••
5 149	11 2100	25 59.0 N	06 08.2 W	•••••	•••••	26.4	26.7	23.7	•••••	•••••	•••••	•••••	•••••
5 150	11 2200	25 52.0 N	06 04.0 W	•••••	•••••	26.4	26.5	24.7	•••••	•••••	•••••	•••••	•••••
5 151	11 2300	25 48.0 N	05 59.0 W	•••••	•••••	26.5	26.6	24.7	•••••	•••••	•••••	•••••	•••••
5 152	12 0	25 43.2 N	05 54.5 W	•••••	•••••	26.4	26.5	23.7	•••••	•••••	•••••	•••••	•••••
5 153	12 100	25 39.2 N	05 50.0 W	37.02	-0.00	26.6	26.7	23.7	•••••	•••••	•••••	•••••	•••••
5 154	12 200	25 38.0 N	05 49.0 W	•••••	•••••	26.5	26.8	22.7	10 56	•••••	4	•••••	STATION 5
5 155	12 300	25 38.0 N	05 49.0 W	•••••	•••••	26.4	26.7	22.7	10 56	•••••	4	•••••	STATION 5
5 156	12 400	25 38.0 N	05 49.0 W	•••••	•••••	26.4	26.7	22.7	10 56	•••••	4	•••••	STATION 5

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA SAMP NUMB	DAY TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PH A H6/H3	WATR TEMP C	AIR TEMP C	DEW POINT C	WIND DIR KN	CUR DIR KN	SEA WAVE HT FT	PHTS TEMP C	REMARKS	
5 157	12 500	25 38.0 N	05 49.0 W	00000	00000	26.4	26.5	22.7	10	SE	0000	4	0000	STATION 5	
5 158	12 600	25 38.0 N	05 49.0 W	00000	00000	26.4	26.5	22.7	10	SE	0000	4	0000	STATION 5	
5 159	12 700	25 38.0 N	05 49.0 W	00000	00000	26.3	26.3	23.1	0000	0000	0000	4	0000	STATION 5	
5 160	12 800	25 38.0 N	05 49.0 W	00000	00000	26.4	26.5	22.7	15	SE	0000	4	0000	ST 5 SECCHI 100	
5 161	12 900	25 38.0 N	05 49.0 W	38.46	017	26.4	27.2	24.2	15	SE	0000	130	4	0000	STATION 5
5 162	12 1000	25 38.0 N	05 49.0 W	00000	00000	26.4	27.0	23.2	15	SE	0000	4	0000	STATION 5	
5 163	12 1100	25 38.0 N	05 49.0 W	00000	00000	26.5	27.9	22.8	15	SE	0000	4	0000	STATION 5	
5 164	12 1200	25 38.0 N	05 49.0 W	00000	00000	26.6	28.4	24.3	15	SE	0000	4	0000	STATION 5	
5 165	12 1229	25 38.0 N	05 49.0 W	38.20	004	26.5	28.5	24.3	15	SE	0000	4	0000	AIRCRAFT ABOVE	
5 166	12 1300	25 38.0 N	05 49.0 W	00000	001	26.5	28.5	24.3	15	SE	0000	4	0000	STATION 5	
5 167	12 1400	25 45.0 N	05 53.5 W	00000	00000	26.7	28.0	23.8	0000	0000	0000	4	0000		
5 168	12 1500	25 53.2 N	06 00.0 W	00000	00000	26.5	28.5	23.3	0000	0000	0000	4	0000		
5 169	12 1600	24 00.0 N	06 05.5 W	00000	00000	26.9	27.0	23.8	0000	0000	0000	4	0000		
5 170	12 1700	23 08.2 N	06 10.5 W	36.72	013	26.5	27.4	24.6	0000	0000	0000	4	0000		
5 171	12 1800	23 15.8 N	06 15.0 W	00000	00000	26.4	27.5	24.8	0000	0000	0000	4	0000		

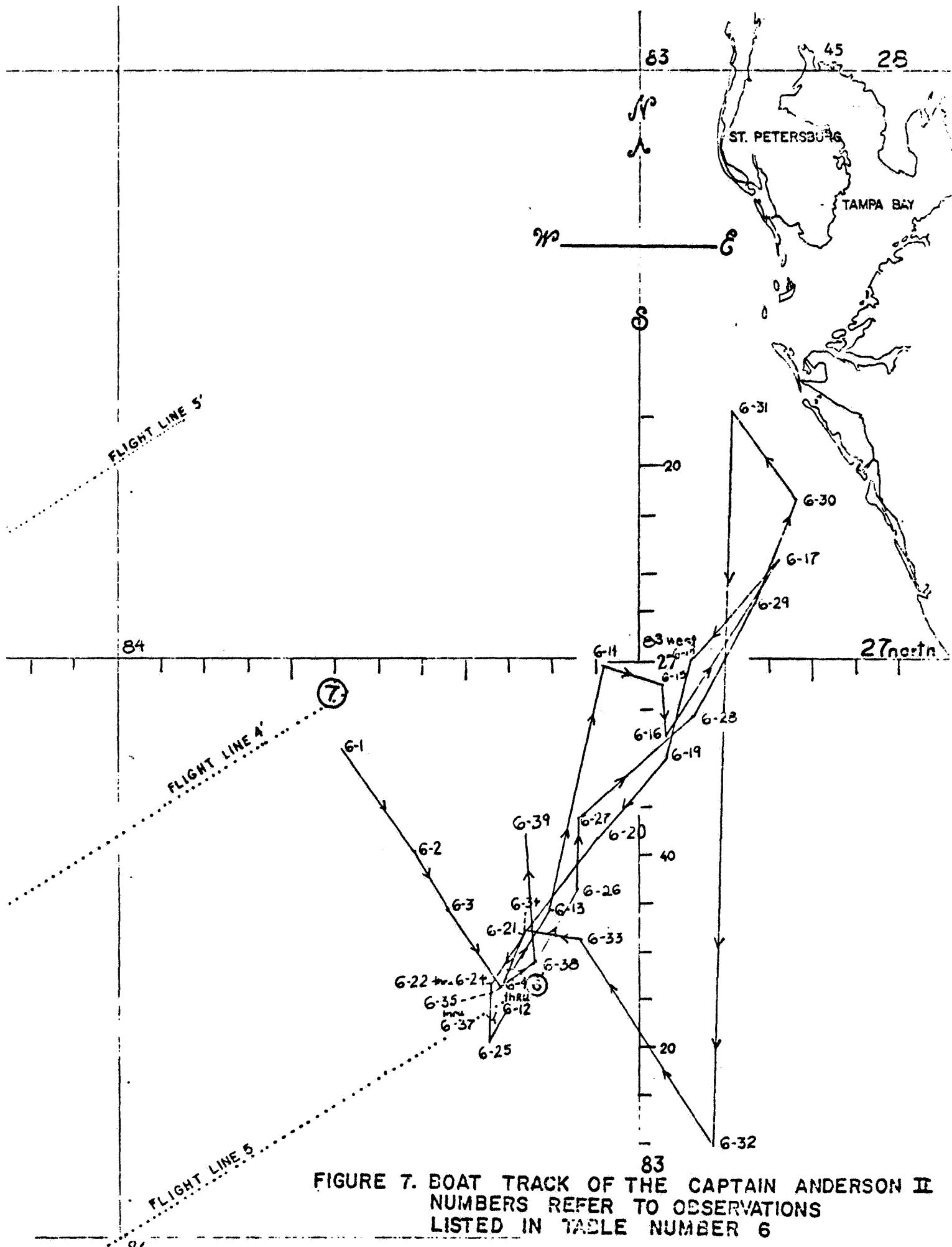
TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA SAMP NUM NUMB	DAY TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLON	WATR PHY A PTS/K	AIR TEMP C	DEW POINT C	WIND DIR KN	WIND DIR KN	CUR DIR KN	CUR DIR KN	SEA PRHS FT	SEA STA TEMP C	REMARKS
5 172	12 1900	26 22.0 N	84 21.0 W	00000	00000	26.5	26.0	24.2	0000	0000	0000	0000	0000	0000	
5 173	12 2000	26 30.0 N	84 26.5 W	00000	00000	26.5	26.0	22.4	0000	0000	0000	0000	0000	0000	
5 174	12 2100	26 35.2 N	84 31.0 W	34.29	011	26.4	26.4	23.7	0000	0000	0000	0000	0000	0000	
5 175	12 2200	26 41.0 N	84 35.0 W	00000	00000	26.3	26.3	23.7	0000	0000	0000	0000	0000	0000	
5 176	12 2300	26 48.0 N	84 38.0 W	00000	00000	26.4	25.4	24.7	0000	0000	0000	0000	0000	0000	
5 177	13 0	26 56.5 N	84 43.5 W	00000	00000	26.4	25.5	24.7	0000	0000	0000	0000	0000	0000	
5 178	13 100	27 05.0 N	84 47.5 W	37.02	024	26.3	25.0	24.6	0000	0000	0000	0000	0000	0000	
5 179	13 100	27 05.0 N	84 47.5 W	37.02	1.31	26.3	25.0	24.6	0000	0000	0000	0000	0000	0000	
5 180	13 200	27 12.0 N	84 51.0 W	00000	00000	26.3	25.7	22.7	0000	0000	0000	0000	0000	0000	
5 181	13 400	27 25.0 N	84 57.5 W	00000	00000	26.3	25.7	22.7	0000	0000	0000	0000	0000	0000	
5 182	13 500	27 31.0 N	87 01.2 W	00000	00000	26.2	26.0	25.7	0000	0000	0000	0000	0000	0000	
5 183	13 400	27 37.2 N	87 05.0 W	00000	00000	26.3	25.7	22.7	0000	0000	0000	0000	0000	0000	
5 184	13 700	27 44.0 N	87 08.0 W	37.03	012	25.2	21.5	21.2	0000	0000	0000	0000	0000	0000	
5 185	13 800			00000	00000	25.0	22.2	22.3	0000	0000	0000	0000	0000	0000	

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

TABLE 5
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUM	DAY	TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A	AIR TEMP HG/M3	WIND DIR PTS/K	WIND DIR KN	CUR	CUR	SEA DIR FT	PHTS TEMP C	REMARKS
5 201	14	0	29 44.0 N	88 40.0 W	•••••	•••••	•••••	23.0	22.2	20.9	•••••	•••••	•••••	•••••	•••••
5 202	14	100	29 51.1 N	88 46.5 W	•••••	•••••	•••••	23.5	22.5	21.4	•••••	•••••	•••••	•••••	•••••
5 203	14	200	30 00.0 N	88 48.5 W	•••••	•••••	•••••	23.5	22.7	22.4	•••••	•••••	•••••	•••••	•••••
5 204	14	300	30 06.7 N	88 52.5 W	•••••	•••••	•••••	23.6	23.0	22.7	•••••	•••••	•••••	•••••	•••••
5 205	14	400	30 13.0 N	88 59.0 W	•••••	•••••	•••••	23.5	23.3	21.3	•••••	•••••	•••••	•••••	•••••
5 206	14	500	30 21.0 N	88 54.0 W	•••••	•••••	•••••	23.1	24.0	22.3	•••••	•••••	•••••	•••••	•••••



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FIGURE 7. BOAT TRACK OF THE CAPTAIN ANDERSON II
NUMBERS REFER TO OBSERVATIONS
LISTED IN TABLE NUMBER 6

TABLE 6
SHIPBOARD SURFACE MEASUREMENTS

STA	STAMP	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR	AIR	DEW	WIND	CUR	SEA	PTBS
NUM	NUM		EDT			PTS/K	PHY/M3	TEMP	TEMP	POINT	SPD	DIR	STA	STA
4	1	11	1030	26 51.0 N	03 34.0 W	00000	00000	24.5	24.0	23.0	0000	0000	0000	0000
4	2	11	1130	26 40.5 N	03 27.0 W	00000	00000	24.5	24.5	23.0	0000	0000	0000	0000
4	3	11	1230	26 34.0 N	03 22.0 W	00000	00000	24.6	24.7	23.0	0000	0000	0000	0000
4	4	11	1330	26 26.0 N	03 16.5 W	00000	00000	25.0	25.3	23.0	0000	0000	0000	0000
4	5	11	1430	26 26.0 N	03 16.5 W	00000	00000	25.1	25.1	23.0	0000	0000	0000	0000
4	6	11	1550	26 26.0 N	03 16.5 W	00000	00000	25.0	25.2	24.0	0000	0000	0000	0000
4	7	11	1600	26 26.0 N	03 16.5 W	00000	00000	25.2	24.8	24.0	0000	0000	0000	0000
4	8	12	1145	26 26.0 N	03 16.5 W	00000	00000	24.7	25.0	24.0	10	NE	001	230
4	9	12	1247	26 26.0 N	03 16.5 W	00000	00000	24.7	26.0	23.0	4	NE	000	240
4	10	12	1400	26 26.0 N	03 16.5 W	00000	00000	24.9	25.0	24.1	15	E	000	250
4	11	12	1500	26 26.0 N	03 16.5 W	00000	00000	25.0	26.4	23.0	10	E	000	250
4	12	12	1600	26 26.0 N	03 16.5 W	00000	00000	24.5	26.0	24.4	10	E	000	250
4	13	12	1700	26 26.0 N	03 16.5 W	00000	00000	25.4	26.6	23.1	5	0000	0000	0000
4	14	12	1800	26 26.0 N	03 04.0 W	00000	00000	25.2	26.6	23.1	5	0000	0000	0000
4	15	12	1900	26 26.0 N	02 57.0 W	00000	00000	24.7	24.1	22.0	0000	0000	0000	0000

TABLE 4
SHIPBOARD SURFACE MEASUREMENTS

STA	STA	SAMP	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATER	AIR	WIND	WIND	CUR	SEA	PHTS
NUM	NUM	NUM					PT5/K	PHY A H6/H3	TEMP C	TEMP C	DIR	SPD KN	DIR	STA FT	TEMP C
			EDT				PT5/K								
4	16	12	2000				.....	.....	24.7	24.5	23+4	.....	.....	.....	.....
4	17	13	000	27	10.0	N	82	44.0	W	.....	.....	23+2	21+8	15	SE
4	18	13	900	27	00.0	N	82	54.0	W	.....	.....	23+5	22+3	15	SE
4	19	13	1000	26	50.0	N	82	57.0	W	.....	.....	24+4	24+0	15	SE
4	20	13	1100	26	41.5	N	83	04.5	W	.....	.....	24+1	25.0	24+0	.....
4	21	13	1200	26	31.0	N	83	13.0	W	.....	.....	24+3	24+4	24+0	.....
4	22	13	1300	26	24.0	N	83	16.5	W	.....	.....	25+3	26+3	24+6	.....
4	23	13	1400	26	24.0	N	83	16.5	W	.....	.....	25+4	25+5	24+6	.....
4	24	13	1500	26	24.0	N	83	16.5	W	.....	0.07	25+4	26+0	24+1	12
4	25	13	1600	26	20.0	N	83	16.5	W	.....	.....	25+1	25+3	24+6	12
4	26	13	1700	26	34.0	N	83	07.0	W	.....	.....	24+3	24+5	24+6	5
4	27	13	1800	26	44.0	N	83	07.0	W	.....	.....	24+3	25+7	24+0	.....
4	28	13	1900	26	54.0	N	82	54.5	W	.....	.....	24+5	24+7	23+4	.....
4	29	13	2000	27	04.0	N	82	47.0	W	.....	.....	24+6	24+6	24+6	1
4	30	14	000	27	14.0	N	82	42.0	W	.....	.....	24+4	25+4	24+0	.....

TABLE 6
SHIPBOARD SURFACE MEASUREMENTS

STA	SAMP	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR	AIR	DEN	WIND	CUR	SEA	PRS	REMARKS
NUM	NUMB		EDT			PTS/K	PHY A H6/H3	TEMP C	TEMP C	POINT	SPD KN	DIR KN	DIR FT	TEMP C	
6	31	14	1000	27 25.0 N	82 50.0 W	0000	0000	24.5	24.6	24.6	0000	0000	0000	0000	0000
6	32	14	1100	26 51.0 N	82 53.0 W	0000	0000	24.5	25.0	24.6	0000	0000	0000	0000	0000
6	33	14	1200	26 38.5 N	83 07.0 W	0000	0000	24.6	24.9	25.1	0000	0000	0000	0000	0000
6	34	14	1300	26 32.0 N	83 13.0 W	0000	0000	25.3	25.1	24.7	0000	0000	0000	0000	0000
6	35	14	1400	26 26.0 N	83 16.5 W	0000	0000	25.5	25.5	24.2	0	50	0.34	355	2 0000
6	36	14	1500	26 26.0 N	83 16.5 W	0000	0000	25.7	25.7	24.1	0	50	0.33	355	2 0000
6	37	14	1545	26 26.0 N	83 16.5 W	0000	0000	25.8	25.8	24.1	5	50	0.32	0000	0000
6	38	14	1700	26 38.0 N	83 10.0 W	0000	0000	25.9	25.9	24.7	0000	0000	0000	0000	0000
6	39	14	1800	26 42.0 N	83 12.0 W	0000	0000	25.3	27.3	25.3	0000	0000	0000	0000	0000

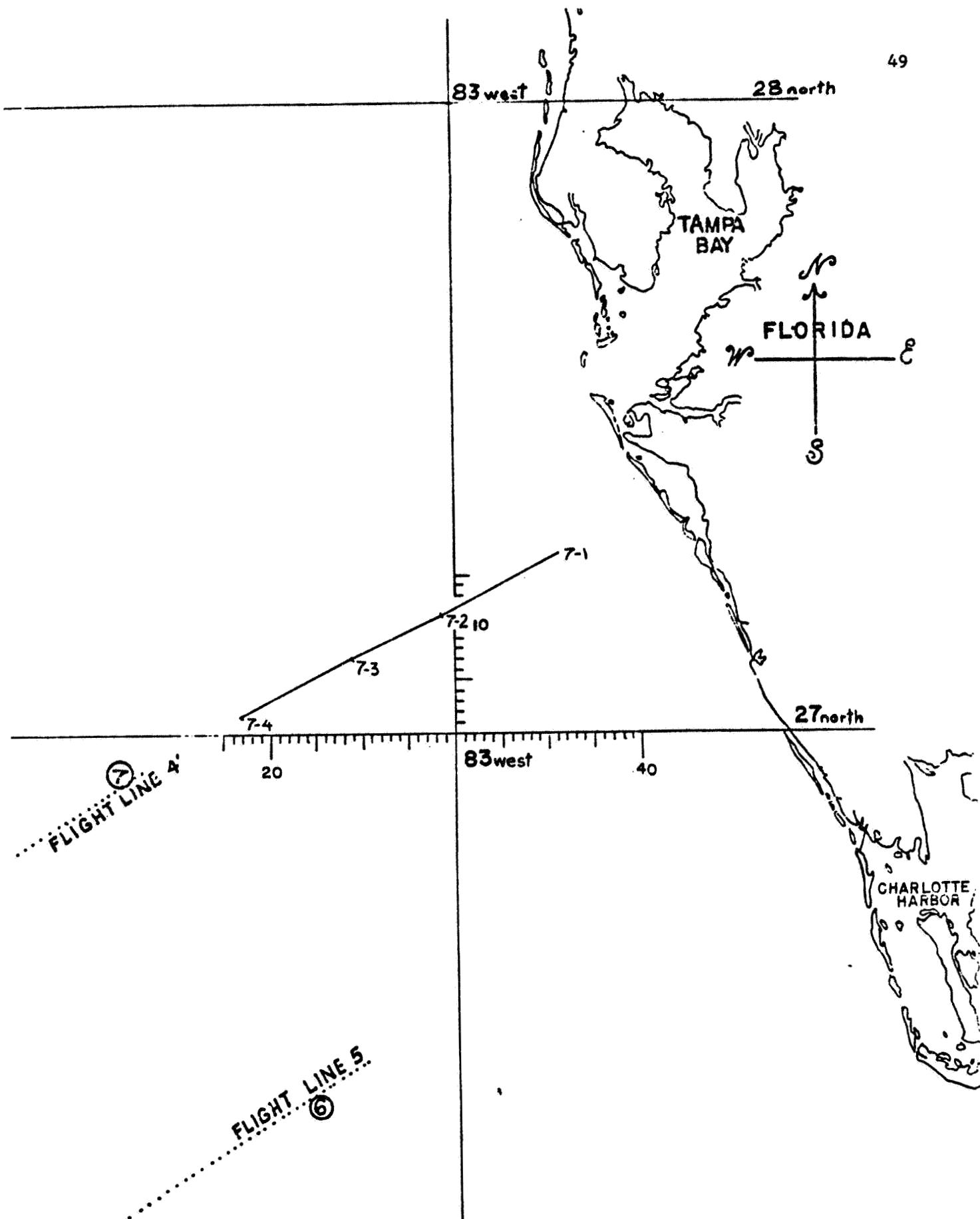


FIGURE 8. BOAT TRACK OF THE CAPTAIN ANDERSON II
NUMBERS REFER TO OBSERVATIONS
LISTED IN TABLE NUMBER 7

TABLE 7
SHIPBOARD SURFACE MEASUREMENTS

STA NUM NUMB	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR PHY A TEMP	AIR TEMP TEMP	DEW POINT	WIND DIR	CUR DIR	CUR DIR	SEA STA	PNIS	REMARKS	
7	1	11 530	27 17.0 N	02 48.5 W	•••••	•••••	•••••	24.1	22.0	20.9	•••••	•••••	•••••	•••••	•••••	•••••
7	2	11 630	27 11.0 N	03 01.5 W	•••••	•••••	•••••	24.0	23.0	22.4	•••••	•••••	•••••	•••••	•••••	•••••
7	3	11 725	27 07.0 N	03 11.5 W	•••••	•••••	•••••	23.8	24.0	22.4	•••••	•••••	•••••	•••••	•••••	•••••
7	4	11 830	27 01.5 N	03 23.0 W	•••••	•••••	•••••	23.5	24.0	22.4	•••••	•••••	•••••	•••••	•••••	•••••
7	5	11 930			•••••	•••••	•••••	23.9	24.4	23.0	•••••	•••••	•••••	•••••	•••••	•••••

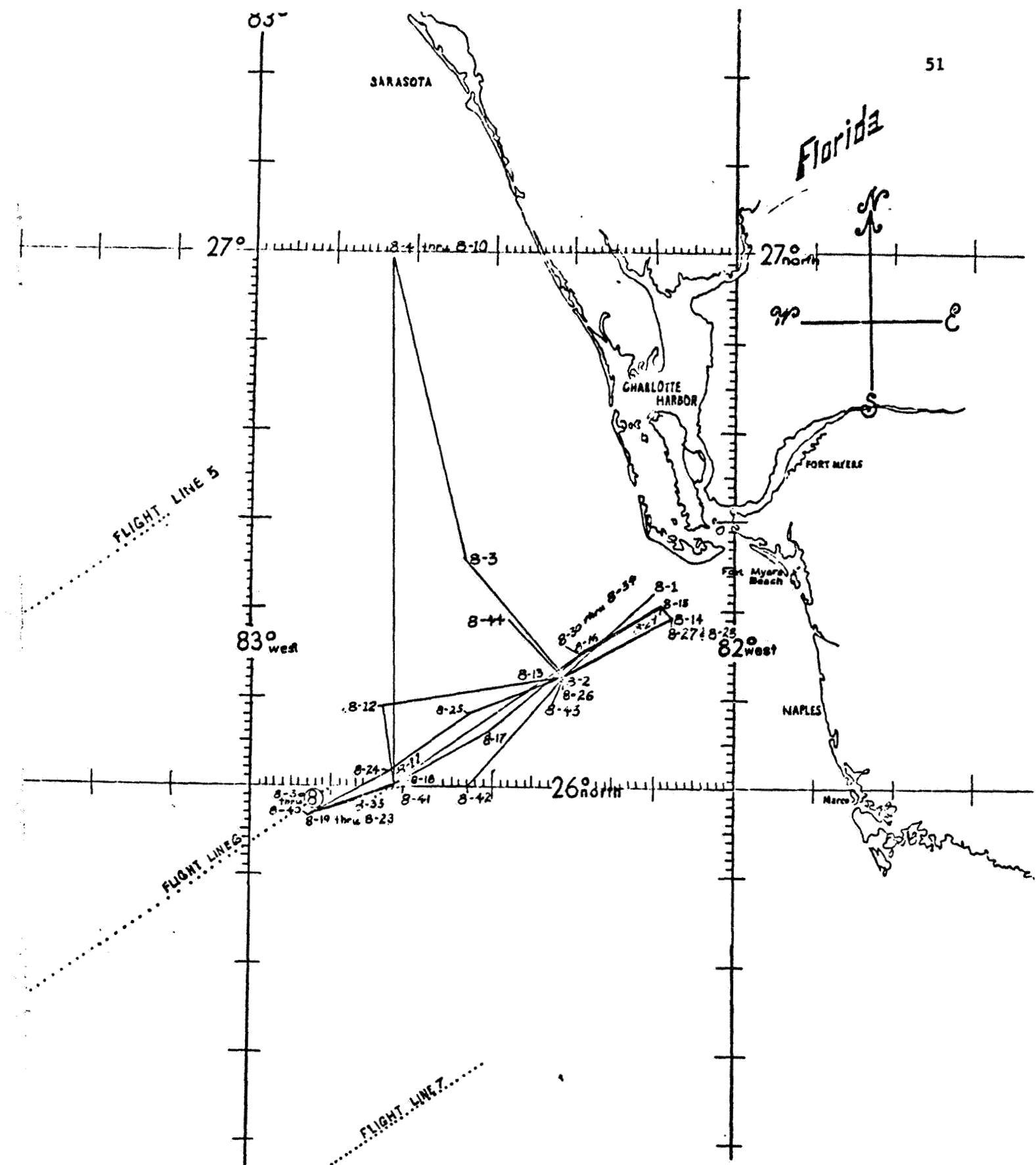


FIGURE 9. BOAT TRACK OF THE CAPTAIN DEEBOLD
NUMBERS REFER TO OBSERVATIONS
LISTED IN TABLE NUMBER 8

TABLE B
SHIPBOARD SURFACE MEASUREMENTS

STA Samp NUM	DAY	TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOK PHY A MG/M3	AIR TEMP C	WATR TEMP C	WIND PINT KN	WIND SPD KN	CUR DIR	SEA DIR	PHIS FT	SEA TEMP C	REMARKS
32	14	900	26 15.0 N	82 19.5 W	•••••	•••••	25.2	24.8	23.4	4	SE	•••	1	••••	
33	14	1000	26 15.0 N	82 19.5 W	•••••	•••••	25.2	25.0	23.0	4	SE	•••	1	••••	
34	14	1100	26 15.0 N	82 19.5 W	•••••	•••••	25.7	25.3	24.6	4	SE	•••	1	••••	
35	14	1200	26 00.5 N	82 42.0 W	•••••	•••••	25.6	25.3	24.1	4	SE	•••	1	••••	
36	14	1300	25 56.8 N	82 53.8 W	•••••	•••••	25.0	25.9	24.1	0	SE	•••	1	••••	
37	14	1400	25 56.8 N	82 53.8 W	•••••	•••••	25.1	25.8	23.7	4	SE	•••	1	••••	
38	14	1500	25 56.8 N	82 53.8 W	•••••	•••••	25.2	26.2	23.7	4	SE	••••	1	••••	
39	14	1550	25 56.0 N	82 54.0 W	•••••	1.53	25.3	26.1	23.1	6	SE	•39	225	1	HEARD PLANE
40	14	1600	25 56.8 N	82 53.8 W	37.29	•••••	25.3	26.1	23.7	4	SE	••••	1	••••	
41	14	1700	26 00.5 N	82 42.0 W	•••••	•••••	25.2	25.9	23.7	4	SE	•••	1	••••	
42	14	1800	26 00.0 N	82 33.0 W	•••••	•••••	25.0	25.4	23.1	4	SE	•••	1	SECCHI 12+	
43	14	1900	26 13.0 N	82 21.0 W	•••••	•••••	25.1	25.3	23.0	4	SE	•••	1	••••	
44	14	2000	26 19.0 N	82 08.5 W	•••••	•••••	25.1	25.3	23.0	4	SE	••••	1	••••	

TABLE 8
SHIPBOARD SURFACE MEASUREMENTS

STA	STAMP	DAY	TIME	LATITUDE	LONGITUDE	SALIN	CHLOR	WATR	AIR	DEM	MIND	CUR	CUR	SEA	PTWS	REMARKS
NUM	NUM		EDT			PTS/K	PHY A	TEMP	TEMP	PONT	SPD	DIR	DIR	STA	TEMP	
						H6/M3	C	C	C	KN	KN	KN	FT	C		
8	14	13	900	26 15.0 N	02 19.5 W	•••••	•••••	25.2	24.8	23.4	10	SE	••••	••••	••••	
8	17	13	1000	26 06.0 N	02 31.0 W	•••••	•••••	25.2	25.0	23.0	10	SE	••••	1	••••	
8	18	13	1100	26 00.5 N	02 42.0 W	•••••	•••••	25.0	25.3	23.0	10	SE	••••	2	••••	
8	19	13	1200	25 56.8 N	02 53.8 W	•••••	•••••	25.0	25.3	23.4	10	SE	••••	2	••••	
8	20	13	1300	25 56.8 N	02 53.8 W	•••••	•••••	25.0	25.7	24.1	10	SE	••••	2	••••	
8	21	13	1400	25 56.8 N	02 53.8 W	•••••	•••••	25.0	25.8	24.1	10	SE	••••	2	••••	
8	22	13	1500	25 56.8 N	02 53.8 W	•••••	•••••	25.1	26.3	23.7	10	SE	••••	2	••••	
8	23	13	1520			•••••	•••••	25.0	26.2	24.1	0	SE	••••	225	••••	FLYOVER
8	24	13	1400	26 01.3 N	02 43.8 W	•••••	•••••	25.1	25.9	24.1	10	SE	••••	••••	••••	
8	25	13	1700	26 09.0 N	02 33.0 W	•••••	•••••	25.0	25.7	23.4	0	SE	••••	1	••••	SECCHI 12+
8	26	13	1800	26 13.0 N	02 21.0 W	•••••	•••••	25.0	25.5	23.0	0	SE	••••	••••	••••	
8	27	13	1900	26 19.0 N	02 08.5 W	•••••	•••••	25.1	25.3	23.0	0	SE	••••	••••	••••	SECCHI 12+
8	29	14	600	26 20.5 N	02 09.0 W	•••••	•••••	25.4	24.4	23.4	0	SE	••••	••••	••••	
8	30	14	700	26 15.0 N	02 19.5 W	•••••	•••••	25.3	24.8	23.4	0	SE	••••	••••	••••	
8	31	14	800	26 15.0 N	02 19.5 W	•••••	•••••	25.4	24.4	22.9	0	SE	••••	••••	••••	

TABLE 8
SHIPBOARD SURFACE MEASUREMENTS

STA	SAHP NUM NUM	DAY	TIME EDT	LATITUDE	LONGITUDE	SALIN	CHLOR PHY A MG/M3	WATR TEMP C	AIR TEMP C	DEW POINT C	WIND SPD KN	WIND DIR KN	CUR DIR KN	SEA STA FT	PHTS STA TEMP C	REMARKS
8	1	12	700	26 18.8 N	82 10.0 W	•••••	•••••	25.3	25.0	23.4	8	SE	••••	2	••••	SECCHI 12•
8	2	12	800	26 13.0 N	82 21.0 W	•••••	•••••	24.8	24.6	23.4	10	SE	••••	••••	••••	
8	3	12	900	26 06.0 N	82 33.0 W	•••••	•••••	25.0	25.4	24.0	10	SE	••••	••••	••••	
8	4	12	1000	25 59.5 N	82 43.5 W	•••••	•••••	25.2	25.4	23.6	10	SE	••••	2	••••	
8	5	12	1100	25 59.5 N	82 43.5 W	•••••	•••••	25.2	25.4	24.1	10	SE	••••	2	••••	
8	6	12	1200	25 59.5 N	82 43.5 W	•••••	•••••	25.0	26.4	24.1	10	SE	••••	2	••••	
8	7	12	1300	25 59.5 N	82 43.5 W	•••••	•••••	25.1	25.0	23.7	10	SE	••••	2	••••	
8	8	12	1400	25 59.5 N	82 43.5 W	•••••	•••••	25.1	24.8	23.7	10	SE	+25	270	2	••••
8	9	12	1500	25 59.5 N	82 43.5 W	•••••	•••••	25.1	26.1	23.2	10	SE	••••	••••	••••	
8	10	12	1600	25 59.5 N	82 43.5 W	•••••	•••••	25.1	25.9	23.7	10	SE	••••	••••	••••	
8	11	12	1700	26 01.3 N	82 43.6 W	•••••	•••••	25.1	25.9	23.7	8	SE	••••	1	••••	
8	12	12	1800	26 09.0 N	82 33.0 W	•••••	•••••	25.0	25.5	23.7	4	SE	••••	1	••••	
8	13	12	1900	26 13.0 N	82 21.0 W	•••••	•••••	25.0	25.0	23.6	12	NE	••••	2	••••	
8	14	12	2000	26 19.0 N	82 08.0 W	•••••	•••••	24.8	24.7	23.0	12	NE	••••	2	••••	
8	15	13	000	26 20.5 N	82 09.0 W	•••••	•••••	25.4	24.4	22.9	10	SE	••••	2	••••	

Ancillary Data

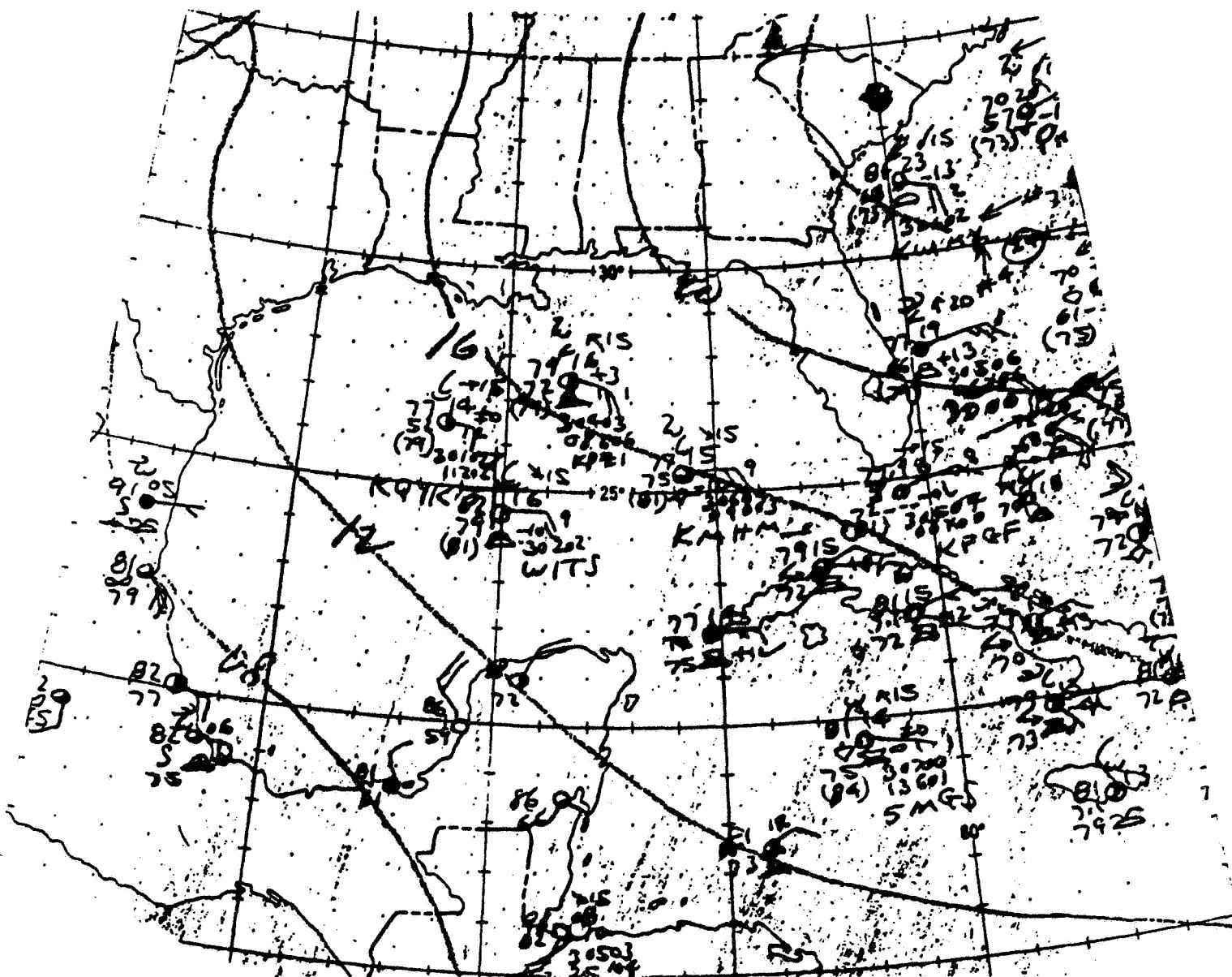


FIGURE 10.

NATIONAL WEATHER SERVICE
NORTHERN HEMISPHERE SURFACE CHART (NMC)
0000Z MAY 7, 1972

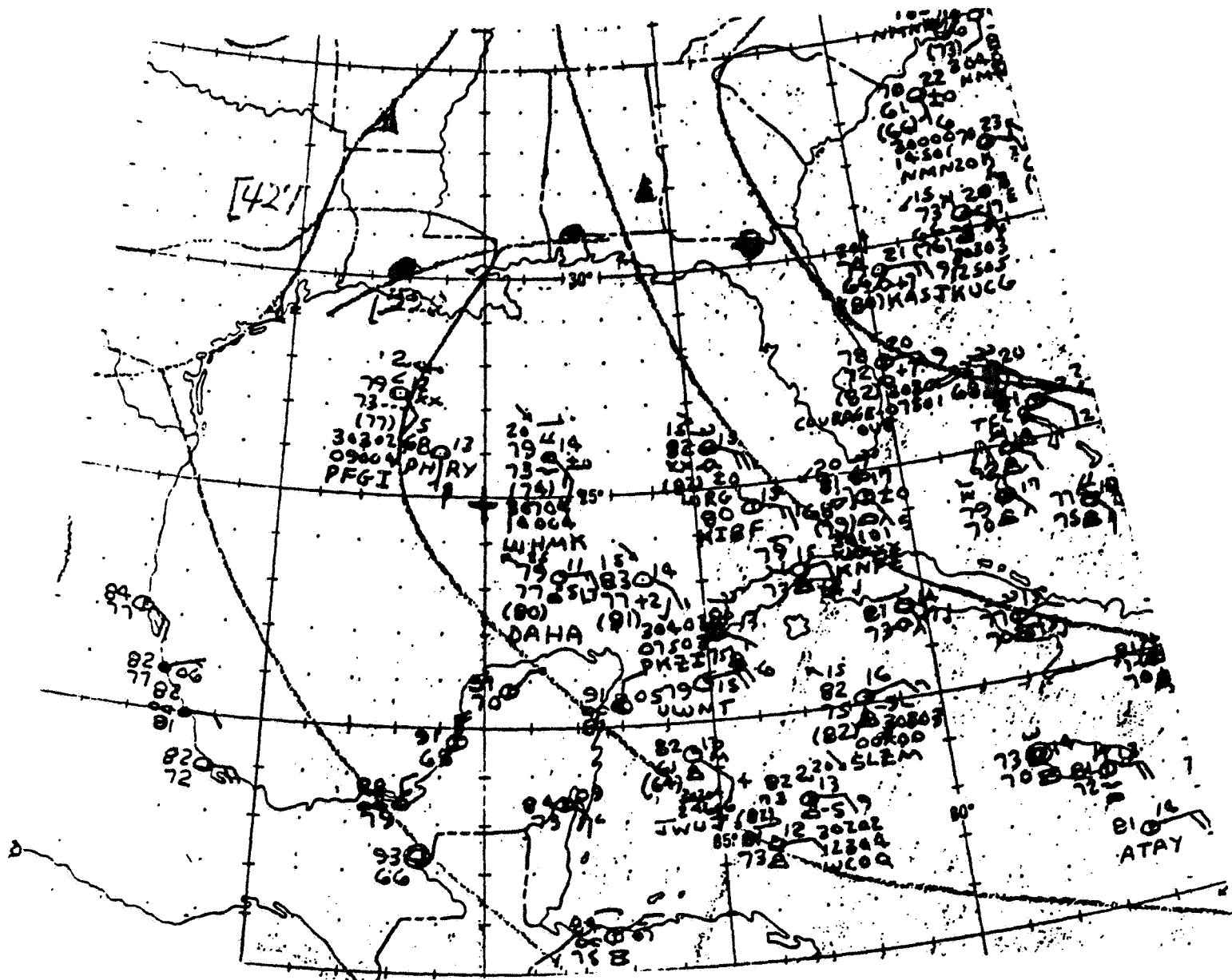


FIGURE 11.

NATIONAL WEATHER SERVICE
NORTHERN HEMISPHERE SURFACE CHART (NMC)
0000Z MAY 8, 1972

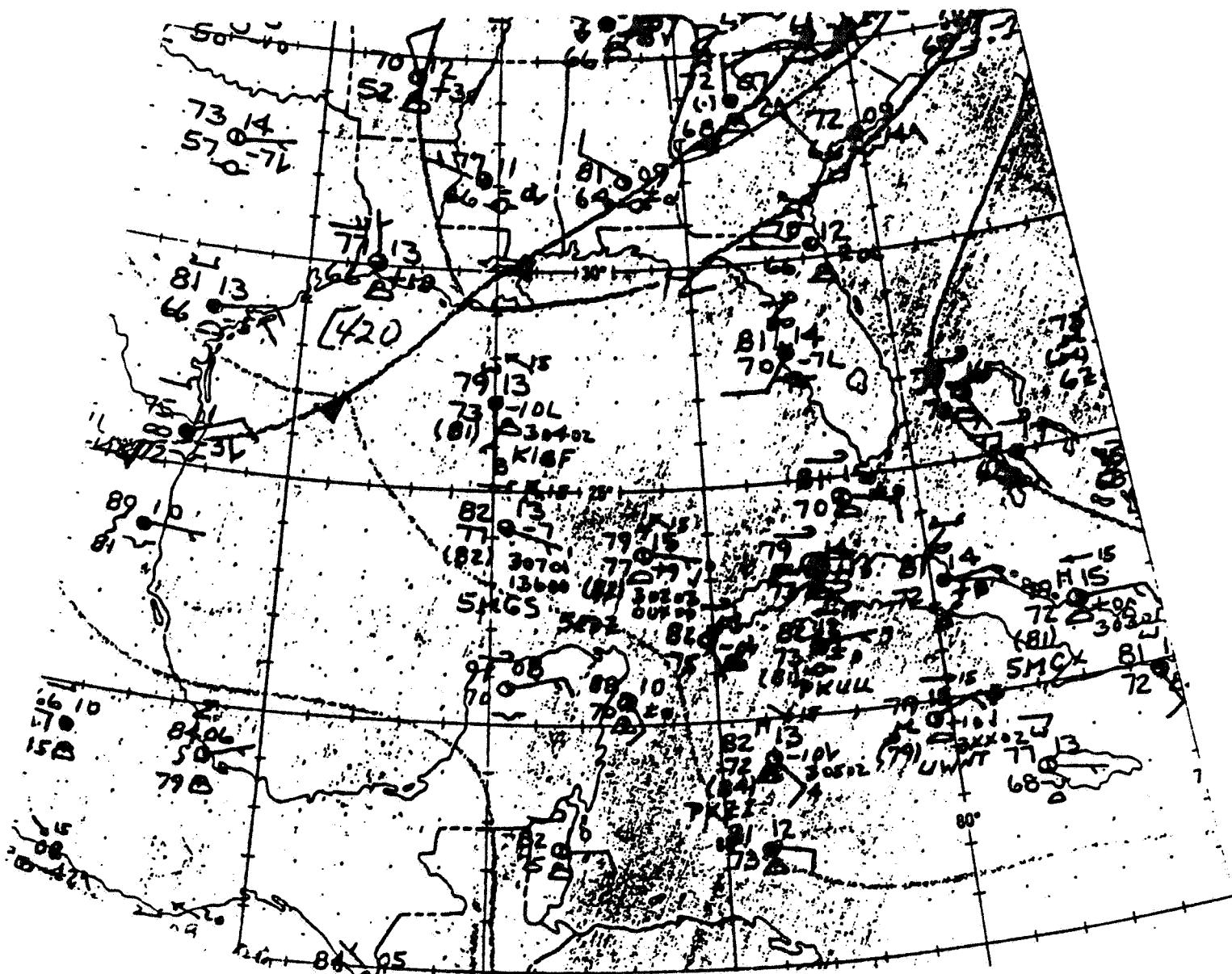


FIGURE 12.

NATIONAL WEATHER SERVICE
NORTHERN HEMISPHERE SURFACE CHART (NMC)
0000Z MAY 9, 1972

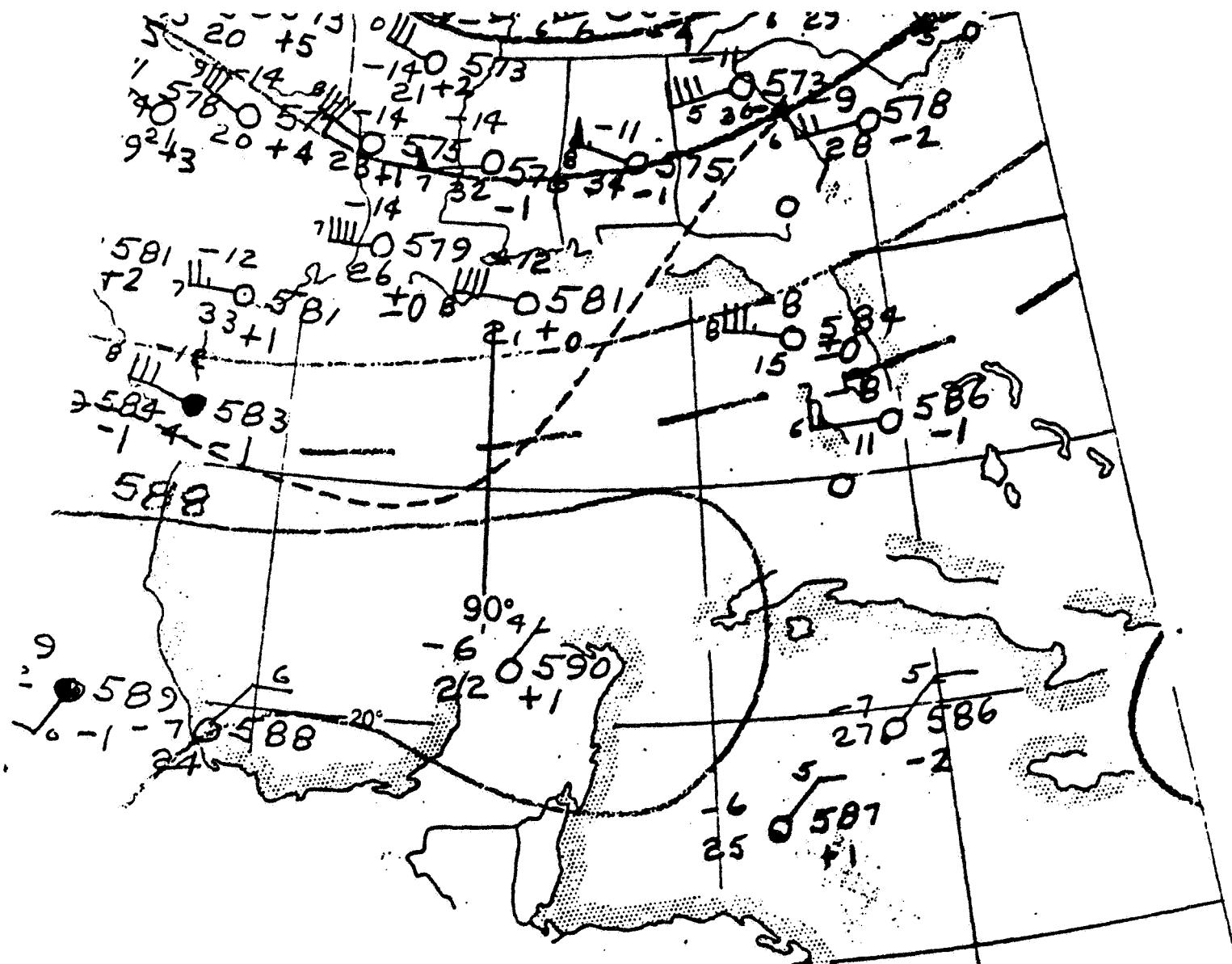


FIGURE 13. NATIONAL WEATHER SERVICE
(NMC) 500 MB ANALYSIS
0000Z MAY 9, 1972

Table 9. A listing of the Boothville, Louisiana, radiosonde,
0000 GMT 9 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1011.5	26.1	22.8	.0
1000.0	24.1	19.8	101.0
850.0	15.5	99.0	1499.0
817.0	16.3	99.0	1815.8
803.0	16.5	99.0	1954.1
700.0	8.4	-13.3	3633.0
556.0	-6.5	-16.2	5475.7
500.0	-12.2	-33.6	5807.0
474.0	-14.5	-28.7	6234.2
424.0	-19.7	-22.5	7126.1
400.0	-21.7	-31.2	7484.0
342.0	-30.9	-39.9	8737.4
300.0	-36.3	-52.3	9785.7
200.0	-59.5	99.0	13029.7
175.0	-65.3	99.0	14098.1
169.0	-61.7	99.0	14377.2
150.0	-59.5	99.0	15331.4
123.0	-67.5	99.0	16919.2
113.0	-66.7	99.0	17597.6
100.0	-63.1	99.0	18575.4

Table 10. A listing of the Key West, Florida, radiosonde,
0000 GMT 9 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1014.2	27.8	23.0	.0
1000.0	25.8	20.8	127.0
966.0	23.7	19.1	403.8
952.0	22.9	14.4	520.6
850.0	16.2	7.7	1534.0
827.0	15.6	7.5	1753.5
700.0	8.3	-3.2	3165.0
667.0	7.1	-18.6	3551.4
662.0	6.8	-.6	3611.6
640.0	5.3	-9.6	3882.0
588.0	.5	-6.8	4560.0
551.0	-2.5	-11.2	5080.0
538.0	-2.7	-24.4	5271.0
509.0	-5.1	-31.0	5714.3
500.0	-5.7	-20.1	5873.0
426.0	-13.7	99.0	7154.5
400.0	.0	-41.3	7658.3
400.0	-17.2	-41.5	7586.0
275.0	-39.5	-63.5	10583.8
169.0	-65.1	99.0	14479.2

TABLE 11. A listing of the Tampa, Florida, radiosonde, 0000 GMT
9 May 1972.

PRESSURE (MILLIBARS)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (METERS)
1013.3	26.6	21.1	0.
1000.0	24.9	19.8	125.
960.0	21.4	17.2	482.
909.0	19.9	14.1	955.
872.0	16.9	14.1	1313.
850.0	15.0	12.3	1530.
834.0	13.8	10.8	1691.
814.0	14.2	7.0	1897.
744.0	8.7	5.0	2650.
716.0	7.6	0.0	2967.
700.0	6.3	.2	3153.
686.0	5.3	-.1	3319.
673.0	5.8	-4.7	3475.
606.0	-.9	-6.9	4324.
587.0	-1.7	-19.2	4578.
516.0	-7.7	-19.9	5592.
500.0	-8.1	-23.2	5837.
457.0	-13.8	-20.3	6529.
420.0	-17.4	-27.3	7166.
400.0	-20.7	-35.4	7529.
321.0	-32.0	-40.1	9120.
300.0	-36.0	-44.5	9594.
281.0	-40.1	-44.8	10045.
250.0	-46.0	99.0	10833.
200.0	-58.2	99.0	12278.
171.0	-65.9	99.0	13246.
157.0	-69.2	99.0	13761.
150.0	-67.1	99.0	14035.
132.0	-69.4	99.0	14802.
125.0	-69.0	99.0	15128.
120.0	-67.3	99.0	15373.
100.0	-71.1	99.0	16462.

Table 12. A listing of the Guantanamo Bay, Cuba, radiosonde,
0000 GMT 9 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1009.0	27.2	21.4	.0
1000.0	25.2	20.2	112.0
969.0	22.5	19.6	364.0
930.0	21.1	13.1	692.6
863.0	15.8	10.0	1290.8
850.0	14.8	13.9	1516.0
775.0	10.5	7.2	2255.1
751.0	9.6	-5.2	2506.7
726.0	9.8	-12.0	2777.6
714.0	8.9	-5.4	2911.0
700.0	9.0	-20.9	3138.0
588.0	1.1	-27.2	4533.0
545.0	--3.4	-14.5	5140.6
528.0	-5.5	-28.0	5394.1
500.0	-7.2	-33.7	5841.0
400.0	-19.1	-45.2	7541.0
300.0	-36.1	-63.1	9842.7
283.0	-39.7	-65.7	10309.4
250.0	-46.3	99.0	11301.4
200.0	-56.3	99.0	13086.7
150.0	-68.1	99.0	15388.4
125.0	-71.3	99.0	16847.1

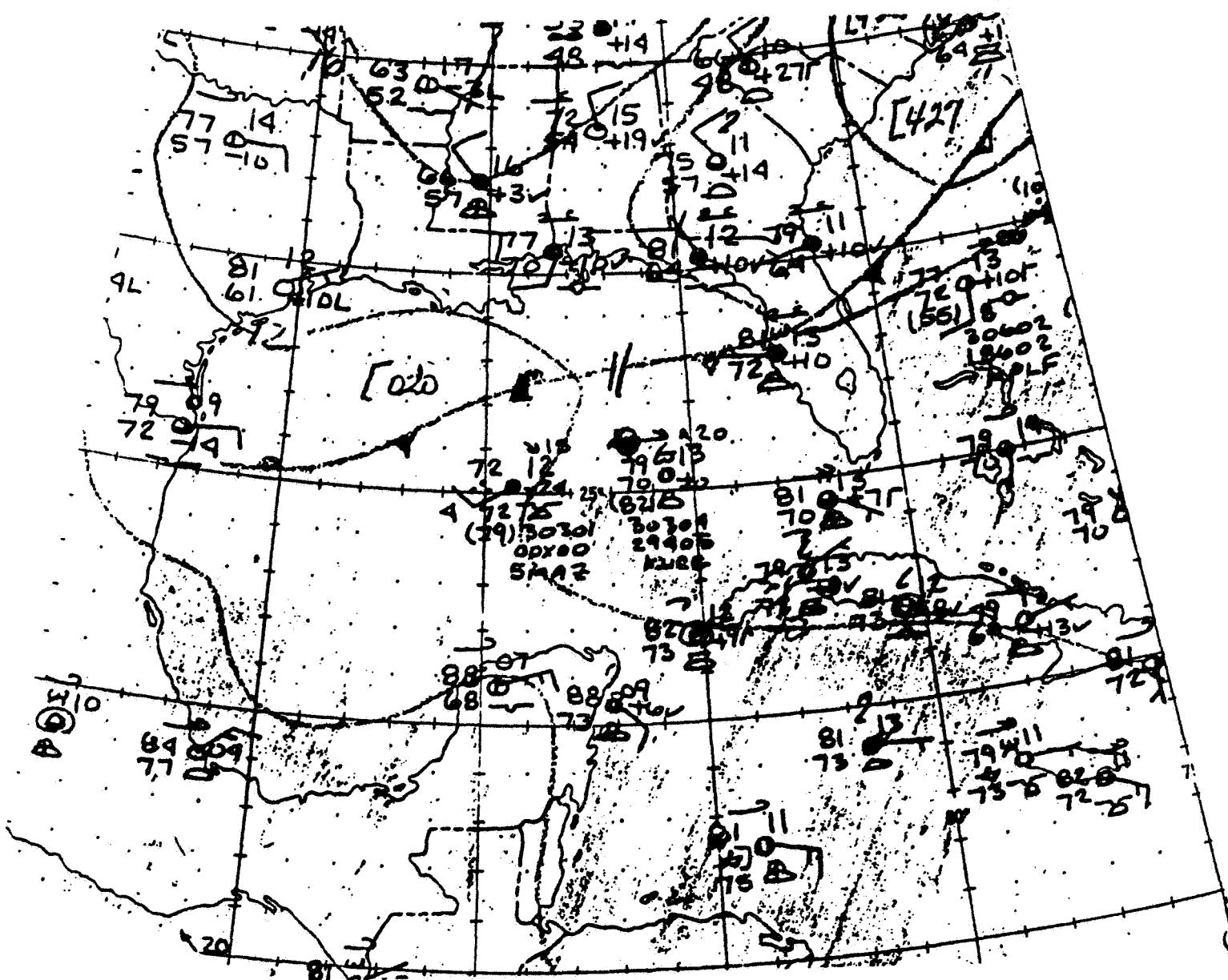


FIGURE 14. NATIONAL WEATHER SERVICE
NORTHERN HEMISPHERE SURFACE CHART (NMC)
0000Z MAY 10, 1972

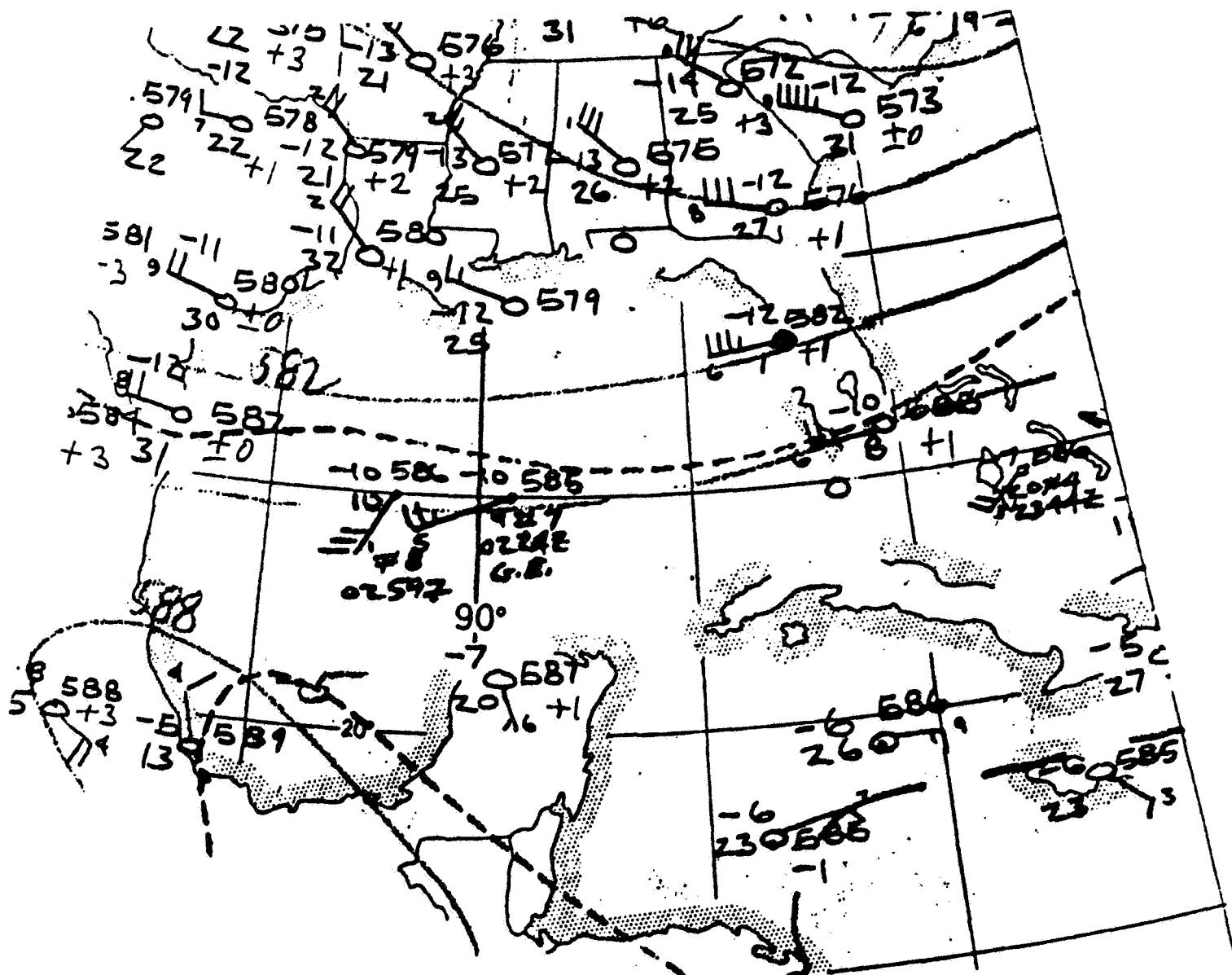


FIGURE 15. NATIONAL WEATHER SERVICE
(NMC) 500 MB ANALYSIS
0000Z MAY 10, 1972

Table 13. A listing of the Boothville, Louisiana, radiosonde,
0000 GMT 10 May 1972

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1013.1	24.9	20.1	.0
1000.0	23.5	18.4	115.0
927.0	18.3	16.7	721.5
863.0	13.9	10.7	1293.8
850.0	13.2	6.6	1509.0
839.0	14.4	-1.3	1613.2
700.0	6.0	-13.1	3126.0
647.0	.0	-9.7	3755.9
637.0	.6	-24.7	3880.6
500.0	-11.9	-36.9	5787.0
400.0	-23.9	-45.3	7458.0
373.0	-27.7	-40.7	8017.1
352.0	-30.5	-33.4	8480.8
331.0	-34.1	-36.6	8972.9
300.0	-39.1	-49.1	9759.7
200.0	-59.1	99.0	13003.7
176.0	-64.5	99.0	14026.5
118.0	-66.1	99.0	17225.2
109.0	-70.6	99.0	17860.0
100.0	-66.3	99.0	18549.4

Table 14 . A listing of the Key West, Florida, radiosonde
0000 GMT 10 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1012.0	27.8	21.6	.0
1000.0	25.5	20.2	111.0
952.0	21.8	20.4	504.6
850.0	18.1	8.7	1520.0
757.0	11.9	2.1	2447.1
726.0	11.3	-10.8	2781.6
720.0	10.5	-.6	2848.0
700.0	10.0	-5.1	3153.0
632.0	4.5	-7.2	3970.6
538.0	-5.5	-12.9	5259.0
523.0	-6.4	-19.7	5485.2
500.0	-9.0	-21.7	5853.0
430.0	-16.3	-34.0	7059.7
400.0	-21.2	-38.2	7543.0
300.0	-35.5	-48.5	9844.7
282.0	-39.5	-53.5	10339.7
200.0	-56.1	99.0	13088.7
150.0	-67.5	99.0	15390.4
134.0	-69.5	99.0	16292.9
116.0	-69.1	99.0	17447.0
105.0	-72.1	99.0	18244.1

TABLE 15. A listing of the Tampa, Florida, radiosonde, 0000 GMT
10 May 1972.

PRESSURE (MILLIBARS)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (METERS)
1011.6	26.1	22.2	0.
1000.0	25.4	21.9	110.
955.0	21.8	19.9	514.
915.0	20.2	16.3	886.
850.0	16.1	12.5	1519.
804.0	12.9	10.5	1991.
782.0	12.2	6.3	2224.
724.0	9.4	-6.8	2867.
700.0	7.2	-5.8	3146.
640.0	1.7	-5.2	3876.
611.0	-1.4	-11.3	4248.
562.0	-5.5	-7.0	4909.
500.0	-11.5	-12.9	5817.
475.0	-14.5	-17.0	6209.
449.0	-14.7	-23.9	6636.
400.0	-21.4	-31.4	7499.
354.0	-28.3	-32.9	8388.
300.0	-37.7	-43.5	9553.
250.0	-46.9	99.0	10786.
211.0	-56.3	99.0	11886.
200.0	-58.5	99.0	12225.
160.0	-65.2	99.0	13606.
150.0	-64.0	99.0	14000.
117.0	-70.3	99.0	15499.
106.0	-66.2	99.0	16092.
100.0	-67.7	99.0	16444.

Table 16. A listing of the Guantanamo Bay, Cuba, radiosonde
0000 GMT 10 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1007.3	27.9	22.6	.0
1000.0	26.3	21.9	97.0
959.0	23.1	21.5	431.9
953.0	23.1	18.8	482.2
892.0	20.2	10.6	1011.4
850.0	17.7	10.3	1511.0
808.0	14.0	7.3	1916.4
797.0	12.7	10.9	2026.1
747.0	10.4	5.2	2544.5
737.0	9.8	6.7	2652.3
733.0	9.7	3.6	2695.8
730.0	9.7	5.7	2728.7
700.0	9.4	-20.6	3064.4
673.0	8.7	-21.2	3379.1
638.0	5.9	-23.4	3806.4
623.0	4.4	-21.6	3996.8
571.0	-1.2	-27.9	4694.1
529.0	-2.9	-30.3	5305.4
520.0	-1.8	-29.4	5442.6
500.0	-4.5	-31.5	5853.0
400.0	-20.1	-46.1	7638.3
300.0	-34.7	-59.7	9940.0
200.0	-44.9	99.0	13184.0
150.0	-56.1	99.0	15485.7

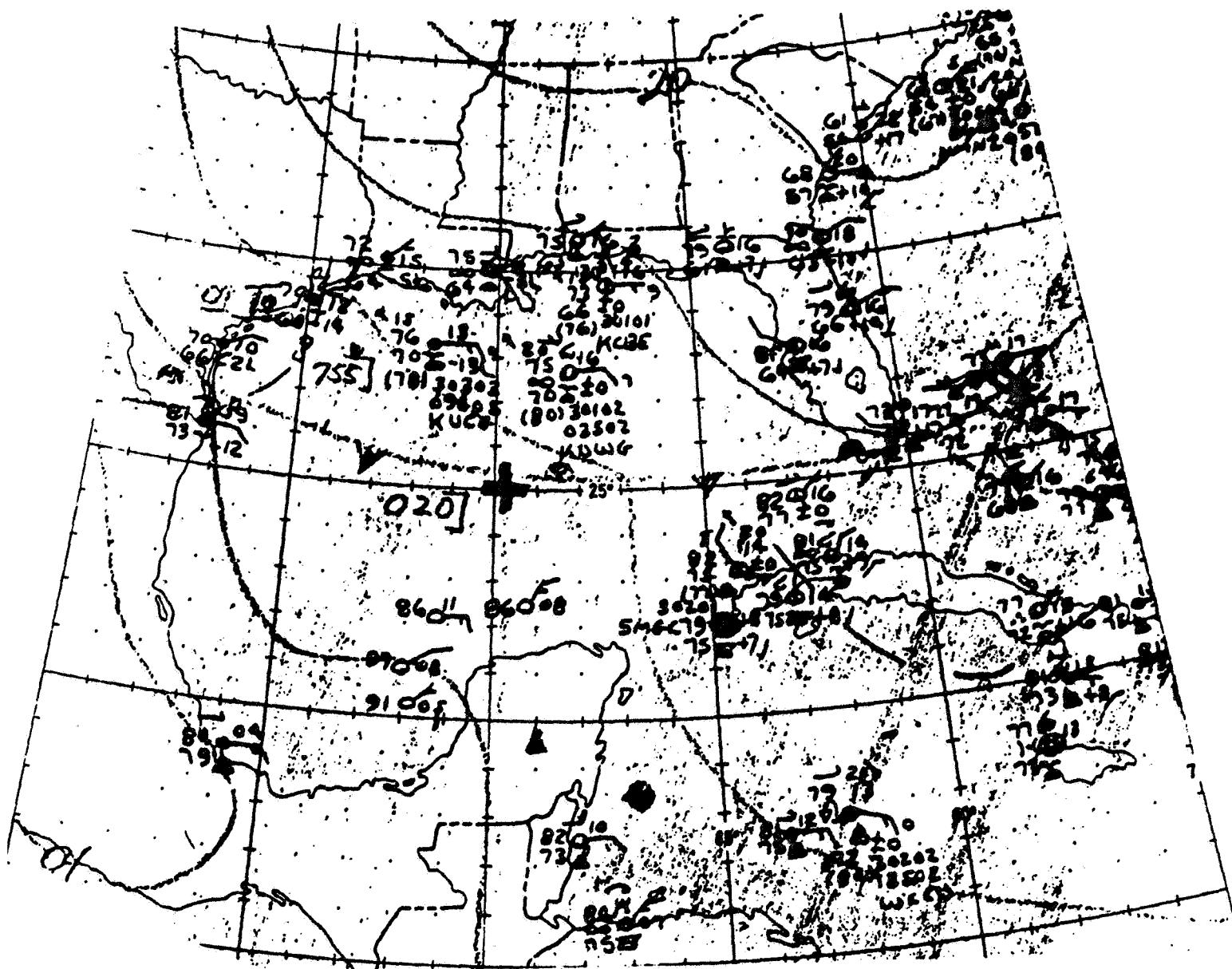


FIGURE 16.

NATIONAL WEATHER SERVICE
NORTHERN HEMISPHERE SURFACE CHART (NMC)
0000Z MAY 11, 1972

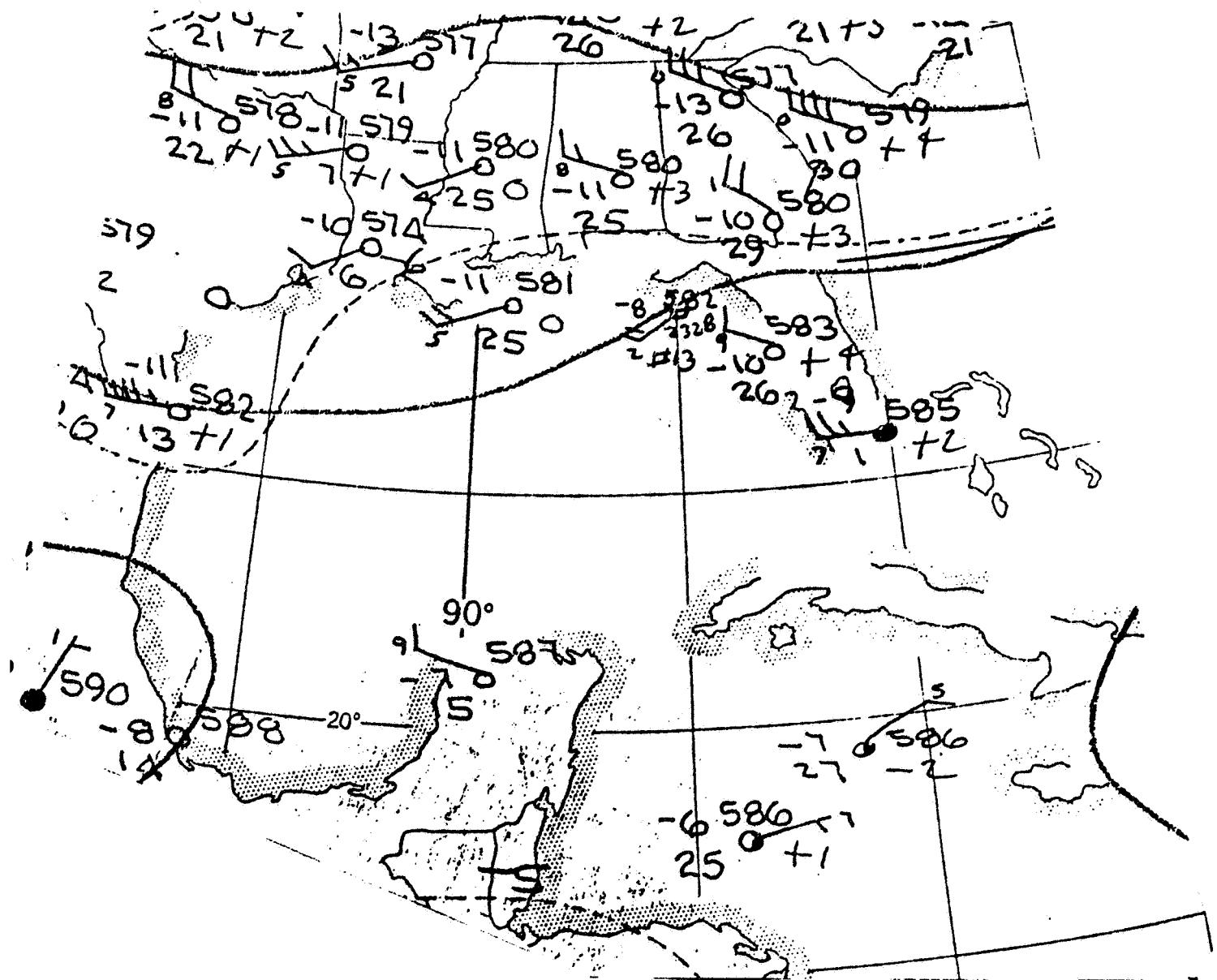


FIGURE 17.

NATIONAL WEATHER SERVICE
(NMC) 500 MB ANALYSIS
0000Z MAY 11, 1972

Table 17. A listing of the Boothville, Louisiana, radiosonde,
0000 GMT 11 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1015.7	22.3	19.4	.0
1000.0	20.6	18.9	137.0
962.0	17.9	16.8	447.0
936.0	17.9	13.4	666.2
870.0	13.6	9.3	1251.2
850.0	13.6	-2.4	1526.0
819.0	13.4	-11.9	1823.2
770.0	10.5	-16.7	2316.8
723.0	6.5	-5.2	2820.7
700.0	4.6	.7	3142.0
669.0	2.0	-23.6	3504.4
638.0	2.0	-23.6	3884.0
556.0	-4.6	99.0	4984.7
500.0	-10.6	-35.5	5814.0
400.0	-22.7	-42.2	7491.0
350.0	-29.1	-31.1	8559.4
316.0	-34.1	-35.8	9377.0
310.0	-35.3	-42.3	9530.3
300.0	-37.5	-44.5	9792.7
200.0	-48.3	99.0	13036.7
150.0	-60.1	99.0	15338.4
100.0	-69.1	99.0	18582.4

Table 18. A listing of the Key West, Florida, radiosonde,
0000 GMT 11 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1014.0	28.1	22.3	.0
1000.0	26.0	21.6	128.0
946.0	21.1	20.4	572.1
904.0	20.1	12.1	935.5
879.0	19.4	7.5	1159.9
850.0	17.8	7.5	1536.0
792.0	13.6	5.0	2101.5
718.0	7.9	4.8	2886.3
700.0	7.6	.0	3164.0
565.0	-2.6	-13.3	4878.2
520.0	-7.1	-13.4	5542.2
500.0	-8.7	-17.7	5852.0
468.0	-12.4	-23.2	6381.2
465.0	-12.4	-28.3	6432.6
459.0	-12.5	-22.5	6536.5
424.0	-14.9	-37.2	7171.1
400.0	-18.1	-37.2	7637.3
300.0	-33.7	-47.7	9939.0
273.0	-39.9	-47.9	10693.6
200.0	-55.7	99.0	13183.0
163.0	-62.7	99.0	14819.7
100.0	-73.1	99.0	18728.8

TABLE 19. A listing of the Tampa, Florida, radiosonde, 0000 GMT
11 May 1972.

PRESSURE (MILLIBARS)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (METERS)
1013.6	28.0	17.6	0.
1000.0	25.9	16.2	128.
946.0	21.5	14.2	614.
850.0	15.7	7.8	1533.
769.0	11.1	-13.4	2376.
705.0	4.9	-5.5	3093.
700.0	5.2	-15.7	3151.
569.0	-2.1	-31.4	4819.
500.0	-10.0	-36.2	5830.
400.0	-21.8	-45.0	7512.
351.0	-29.8	-50.1	8459.
300.0	-37.6	-55.4	9560.
267.0	-44.3	99.0	10353.
250.0	-48.6	99.0	10790.

Table 20. A listing of the Guantanamo Bay, Cuba, radiosonde,
0000 GMT 11 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1009.3	28.2	23.1	.0
1000.0	25.5	20.3	114.0
959.0	24.1	16.4	448.9
850.0	16.9	9.6	1527.0
740.0	8.6	5.7	2635.8
700.0	7.0	-.5	3152.0
683.0	5.6	-2.8	3348.7
663.0	6.4	-23.1	3586.5
573.0	-2.4	-27.1	4753.7
563.0	-3.5	-16.8	4894.6
546.0	-3.6	-17.6	5139.9
543.0	-4.2	-12.6	5184.0
530.0	-5.1	-26.4	5377.8
500.0	-8.6	-31.4	5844.0
400.0	-19.3	-45.3	7537.0
300.0	-34.1	-59.1	9610.0
272.0	-39.7	-65.7	10393.9
200.0	-44.3	99.0	12854.0
150.0	-70.5	99.0	15155.7
100.0	-75.7	99.0	18399.8

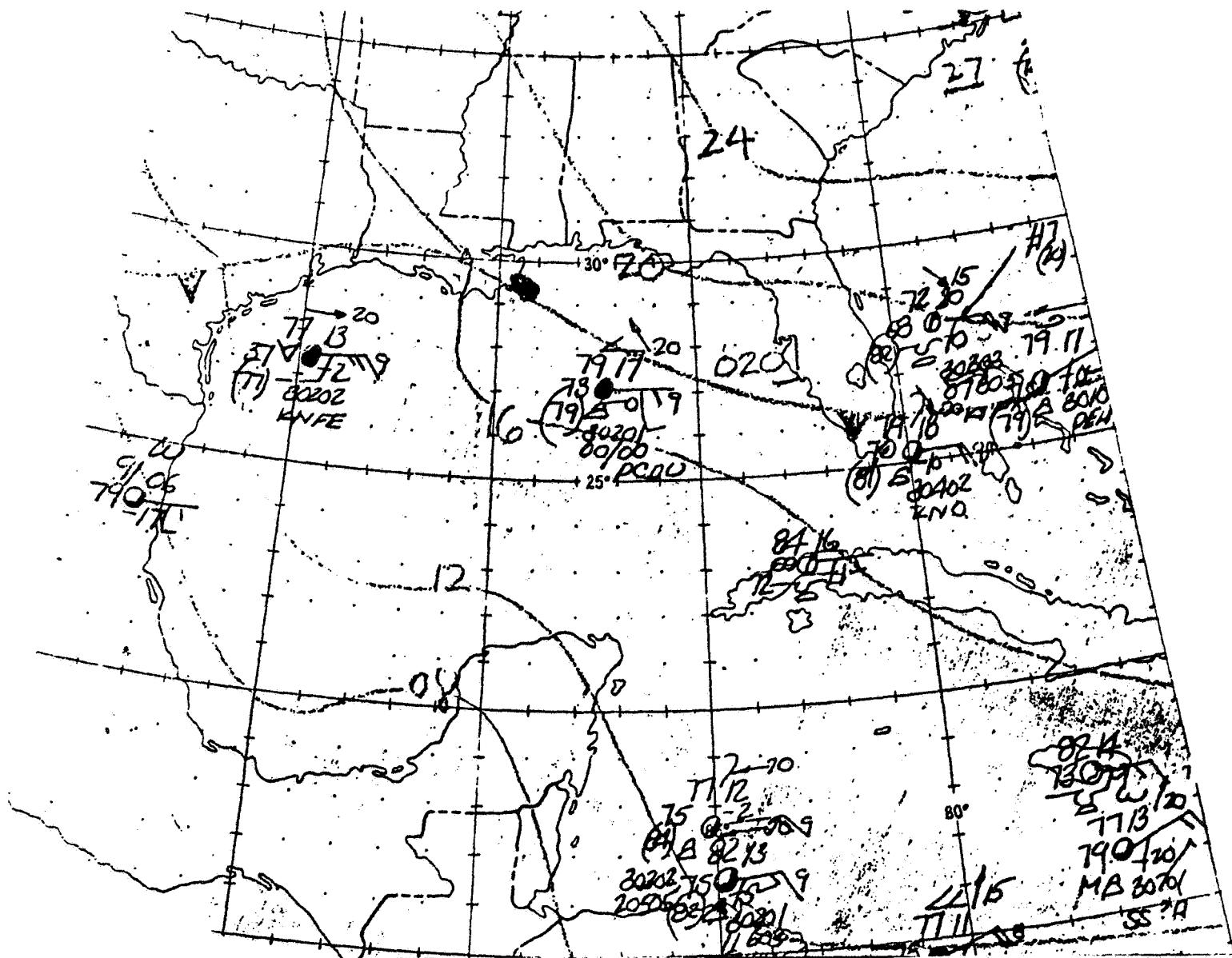


FIGURE 18.

NATIONAL WEATHER SERVICE
NORTHERN HEMISPHERE SURFACE CHART (NMC)
0000Z MAY 12, 1972

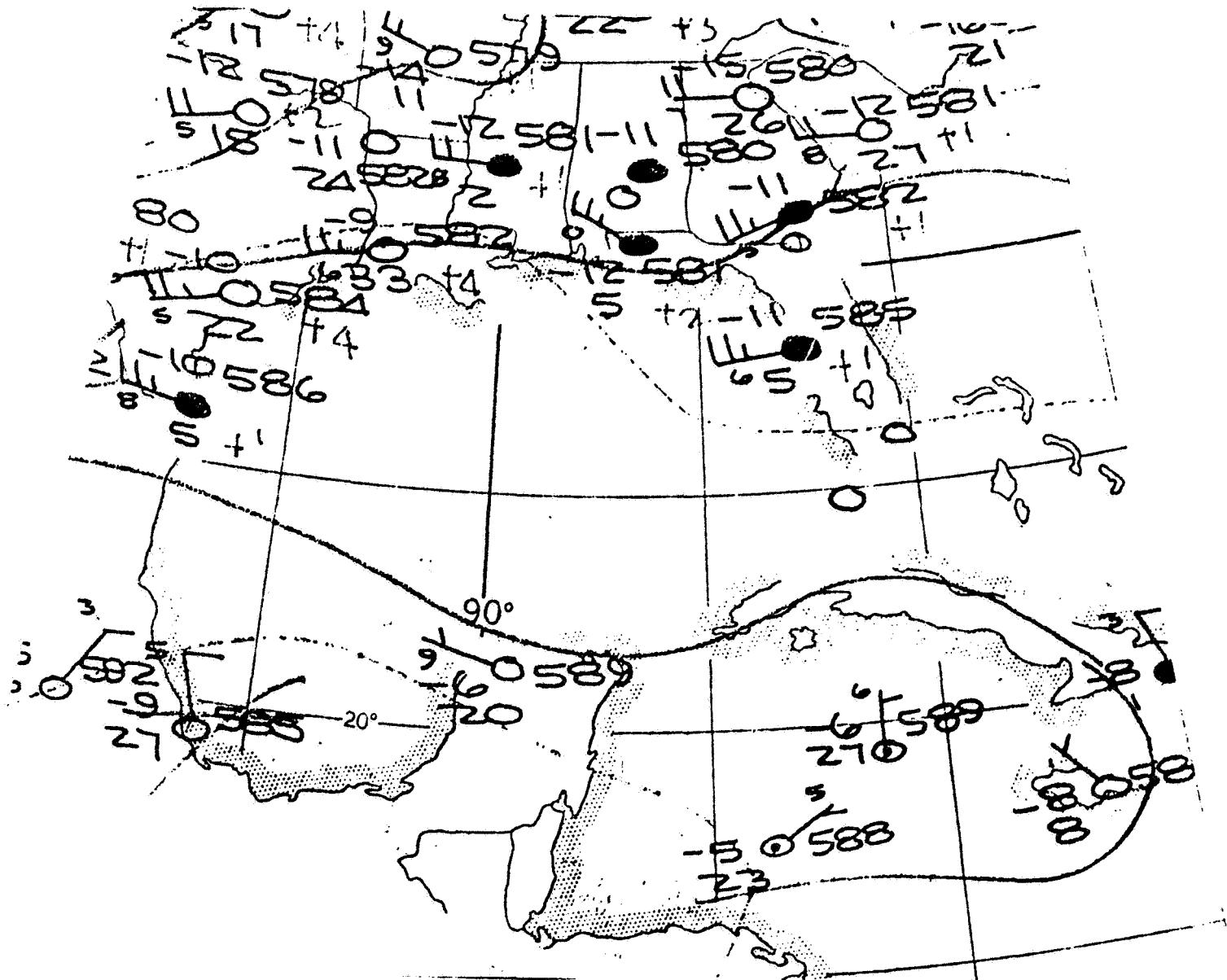


FIGURE 19.

NATIONAL WEATHER SERVICE
(NMC) 500 MB ANALYSIS
0000Z MAY 12, 1972

Table 21. A listing of the Boothville, Louisiana, radiosonde,
0000 GMT 12 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1016.0	22.1	20.9	.0
1000.0	21.1	19.9	141.0
850.0	13.9	12.3	1535.0
700.0	4.0	1.2	3146.0
645.0	.0	-1.6	3800.7
606.0	-1.3	-4.1	4299.7
548.0	-6.1	-8.0	5104.6
500.0	-11.4	-16.0	5812.0
300.0	-37.1	-41.9	9797.7
220.0	-54.7	99.0	12279.2
144.0	-72.1	99.0	15670.0
120.0	-68.3	99.0	17128.7
104.0	-71.3	99.0	18273.7
100.0	-68.3	99.0	18587.4

Table 22. A listing of the Key West, Florida, radisonde,
0000 GMT 12 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1015.0	28.3	21.3	.0
1000.0	25.0	20.0	142.0
972.0	23.0	20.3	369.2
950.0	23.4	11.4	552.4
850.0	17.5	8.1	1551.0
752.0	9.9	3.9	2531.1
726.0	9.3	-4.2	2812.6
700.0	7.8	-5.6	3178.0
637.0	3.5	-1.0	3932.6
585.0	-1.7	-8.9	4613.9
564.0	-2.9	-15.3	4906.4
531.0	-5.4	-15.8	5388.8
500.0	-7.2	-20.8	5870.0
472.0	-10.4	-26.2	6331.1
400.0	-21.4	-34.0	7563.0
384.0	-21.9	-38.9	7889.6
279.0	-39.7	-54.7	10445.3
200.0	-57.9	99.0	13108.7
162.0	-66.9	99.0	14794.7
150.0	-66.7	99.0	15410.4
106.0	-73.3	99.0	18188.3

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TABLE 23. A listing of the Tampa, Florida, radiosonde, 0000 GMT
12 May 1972.

PRESSURE (MILLIBARS)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (METERS)
1016.7	29.3	18.4	0.
1000.0	27.0	17.3	155.
882.0	17.4	15.3	1250.
850.0	15.4	12.7	1565.
746.0	7.1	2.9	2658.
700.0	4.3	2.3	3180.
682.0	3.1	.9	3392.
637.0	1.8	-27.3	3944.
605.0	-1.6	-6.4	4357.
563.0	-4.8	-13.0	4927.
531.0	-7.9	-11.3	5385.
508.0	-10.7	-13.7	5728.
500.0	-11.1	-15.0	5850.
487.0	-11.7	-23.0	6052.
457.0	-14.0	-27.2	6538.
400.0	-22.3	-43.6	7533.
357.0	-27.7	-46.2	8360.
325.0	-32.8	-38.8	9028.
300.0	-36.7	-45.6	9587.
282.0	-39.7	-49.9	10013.
250.0	-46.1	99.0	10825.
200.0	-58.4	99.0	12269.
158.0	-68.1	99.0	13718.
150.0	-68.3	99.0	14030.
143.0	-70.7	99.0	14315.
134.0	-67.0	99.0	14704.
100.0	-70.5	99.0	16456.

Table 24. A listing of the Guantanamo Bay, Cuba, radiosonde,
0000 GMT 12 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1011.0	25.1	21.0	.0
1000.0	24.5	20.6	128.0
975.0	24.4	20.7	330.6
950.0	22.5	22.1	538.4
865.0	17.6	16.5	1288.3
850.0	16.9	11.4	1541.0
830.0	15.1	14.2	1731.5
770.0	11.5	10.9	2331.8
734.0	9.5	5.6	2714.9
724.0	9.0	7.9	2824.7
700.0	8.1	3.2	3170.0
679.0	7.0	-1.2	3413.7
602.0	1.3	-4.4	4376.7
553.0	-3.2	-3.9	5056.0
500.0	-7.5	-8.7	5871.0
449.0	-12.7	-16.8	6731.8
444.0	-13.1	-21.2	6821.4
408.0	-17.7	-26.4	7497.9
400.0	-18.5	-44.8	7575.0
353.0	-26.3	-36.3	8575.1
345.0	-26.5	99.0	8758.5
300.0	-34.1	-40.1	9876.7
272.0	-39.9	-45.9	10660.6
250.0	-43.3	99.0	11335.4
200.0	-43.3	99.0	13120.7
150.0	-56.3	99.0	15422.4
135.0	-69.9	99.0	16265.4
100.0	-64.9	99.0	18666.4

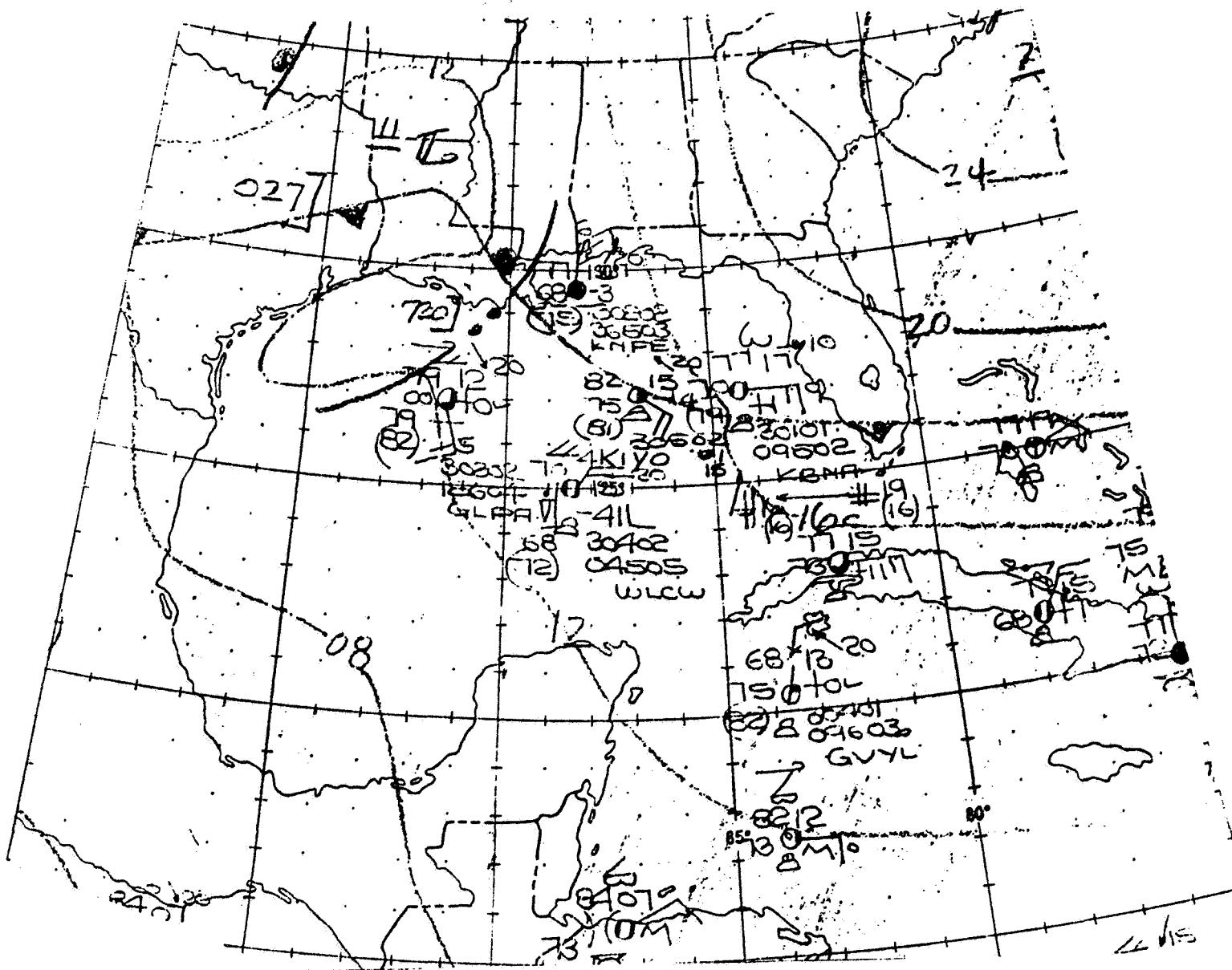


FIGURE 20.

NATIONAL WEATHER SERVICE
NORTHERN HEMISPHERE SURFACE CHART (NMC)
0000Z MAY 13, 1972

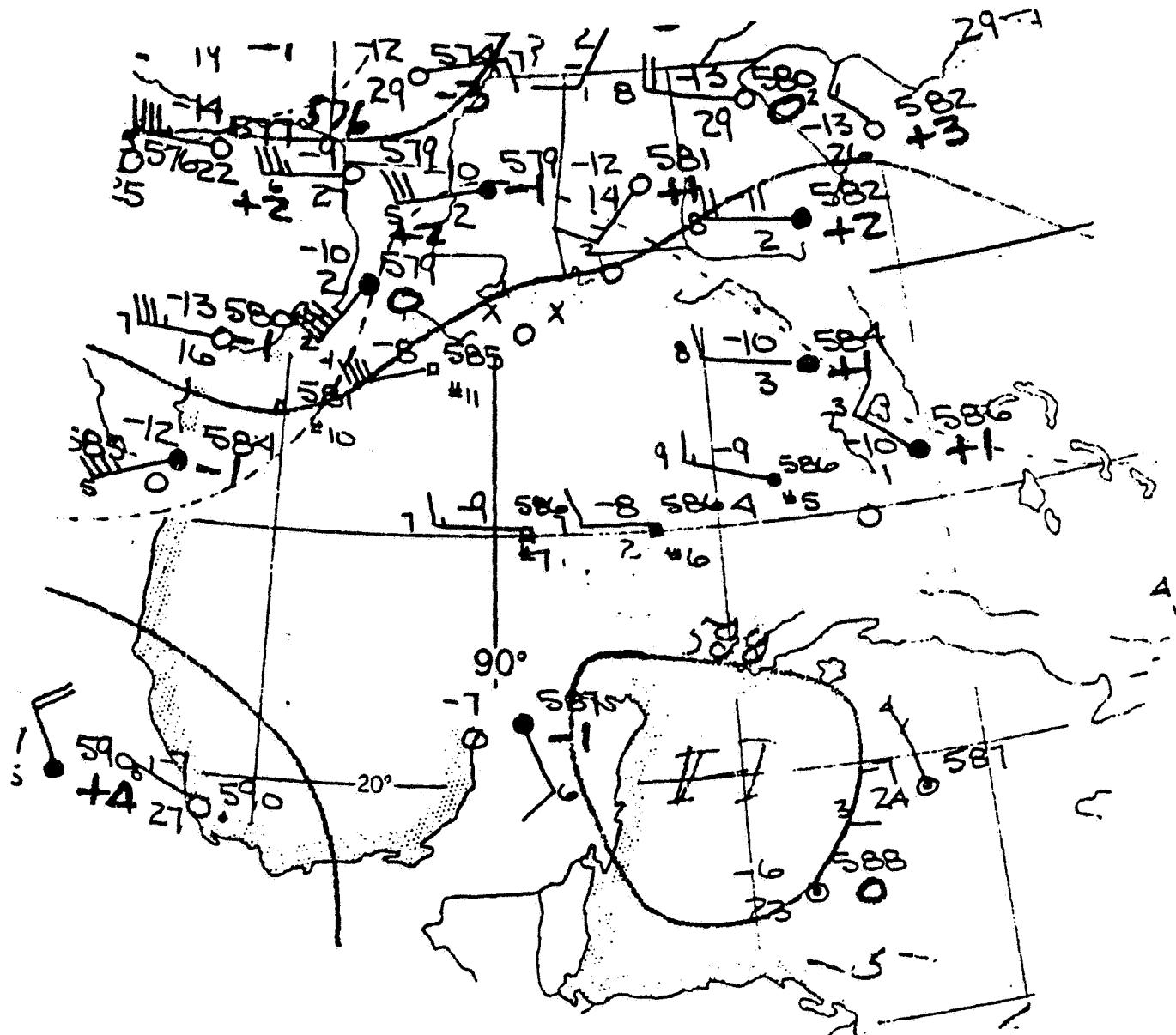


FIGURE 21.

NATIONAL WEATHER SERVICE
(NMC) 500 MB ANALYSIS
0000Z MAY 13, 1972

Table 25. A listing of the Boothville, Louisiana, radiosonde,
0000 GMT 13 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1013.5	21.4	19.0	.0
1000.0	21.0	17.8	113.0
983.0	20.6	16.6	250.2
931.0	18.0	16.8	685.0
850.0	14.3	12.6	1413.3
700.0	4.6	3.0	2966.7
850.0	13.1	12.6	1513.0
700.0	4.6	3.0	3128.0

Table 26. A listing of the Key West, Florida, radiosonde,
0000 GMT 13 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1015.0	27.5	19.8	.0
1000.0	25.3	20.4	138.0
949.0	21.0	20.4	556.8
901.0	18.4	12.8	972.1
850.0	16.2	10.4	1543.0
713.0	7.7	-7.1	2926.8
700.0	6.3	-2.3	3167.0
692.0	5.5	.9	3259.0
668.0	4.4	-4.1	3541.4
594.0	-2.8	-8.4	4480.7
550.0	-6.3	-27.9	5096.5
544.0	-6.8	-21.5	5184.2
535.0	-6.0	-32.6	5317.7
514.0	-6.3	99.0	5638.1
500.0	-7.8	-34.1	5845.0
419.0	-18.3	-34.3	7259.0
412.0	-17.9	99.0	7393.8
400.0	-19.4	-43.3	7541.0
300.0	-36.5	-59.5	9842.7
282.0	-40.1	-62.1	10337.7
200.0	-47.1	99.0	13086.7
150.0	-58.9	99.0	15388.4
122.0	-71.7	99.0	17041.5
100.0	-72.1	99.0	18632.4

TABLE 27 . A listing of the Tampa, Florida, radiosonde, 0000 GMT
13 May 1972.

PRESSURE (MILLIBARS)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (METERS)
1017.0	25.8	18.1	0.
1000.0	25.0	17.7	157.
928.0	18.5	15.9	807.
850.0	14.2	11.7	1557.
700.0	4.7	2.8	3172.
643.0	1.3	-1.2	3862.
587.0	-3.6	-9.6	4589.
579.0	-4.2	-6.9	4698.
564.0	-5.4	-11.6	4905.
548.0	-5.9	-10.4	5131.
538.0	-7.2	-15.6	5275.
512.0	-9.6	-11.0	5659.
500.0	-10.3	-12.9	5843.
469.0	-13.4	-13.4	6333.
421.0	-18.4	-26.9	7148.
400.0	-20.9	-26.8	7528.
388.0	-22.8	-26.4	7752.
365.0	-26.0	-49.0	8198.
319.0	-33.9	-47.3	9158.
300.0	-36.8	-42.5	9585.
281.0	-40.0	48.8	10035.
250.0	-46.7	99.0	10822.
200.0	-58.4	99.0	12264.
171.0	-66.5	99.0	13231.
155.0	-68.8	99.0	13822.
150.0	-67.7	99.0	14019.
144.0	-66.9	99.0	14265.
123.0	-71.0	99.0	15208.
119.0	-68.8	99.0	15404.
100.0	-71.7	99.0	16438.

Table 28 . A listing of the Guantanamo Bay, Cuba, radiosonde,
0000 GMT 13 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1009.8	27.3	21.8	.0
1000.0	25.4	21.5	119.0
910.0	19.2	19.0	873.6
850.0	16.0	15.5	1528.0
733.0	8.7	8.6	2712.8
711.0	6.4	5.1	2956.7
700.0	6.0	-.8	3153.0
682.0	4.4	-5.2	3361.4
673.0	4.7	3.3	3467.7
622.0	1.8	-4.7	4098.2
544.0	-4.5	-7.0	5170.2
527.0	-5.1	-12.3	5424.3
500.0	-6.8	-24.0	5848.0
480.0	-10.5	-28.2	6174.6
459.0	-14.2	-22.2	6532.5
434.0	-17.0	-19.7	6980.6
400.0	-19.6	-22.0	7540.0
300.0	-34.5	-38.7	9612.0
271.0	-40.0	-45.3	10425.4
250.0	-43.6	99.0	10861.0
200.0	-51.5	99.0	12314.0
183.0	-63.0	99.0	13024.7
177.0	-61.5	99.0	13291.4
150.0	-68.2	99.0	14085.0
127.0	-73.9	99.0	15416.7
115.0	-74.3	99.0	15648.0

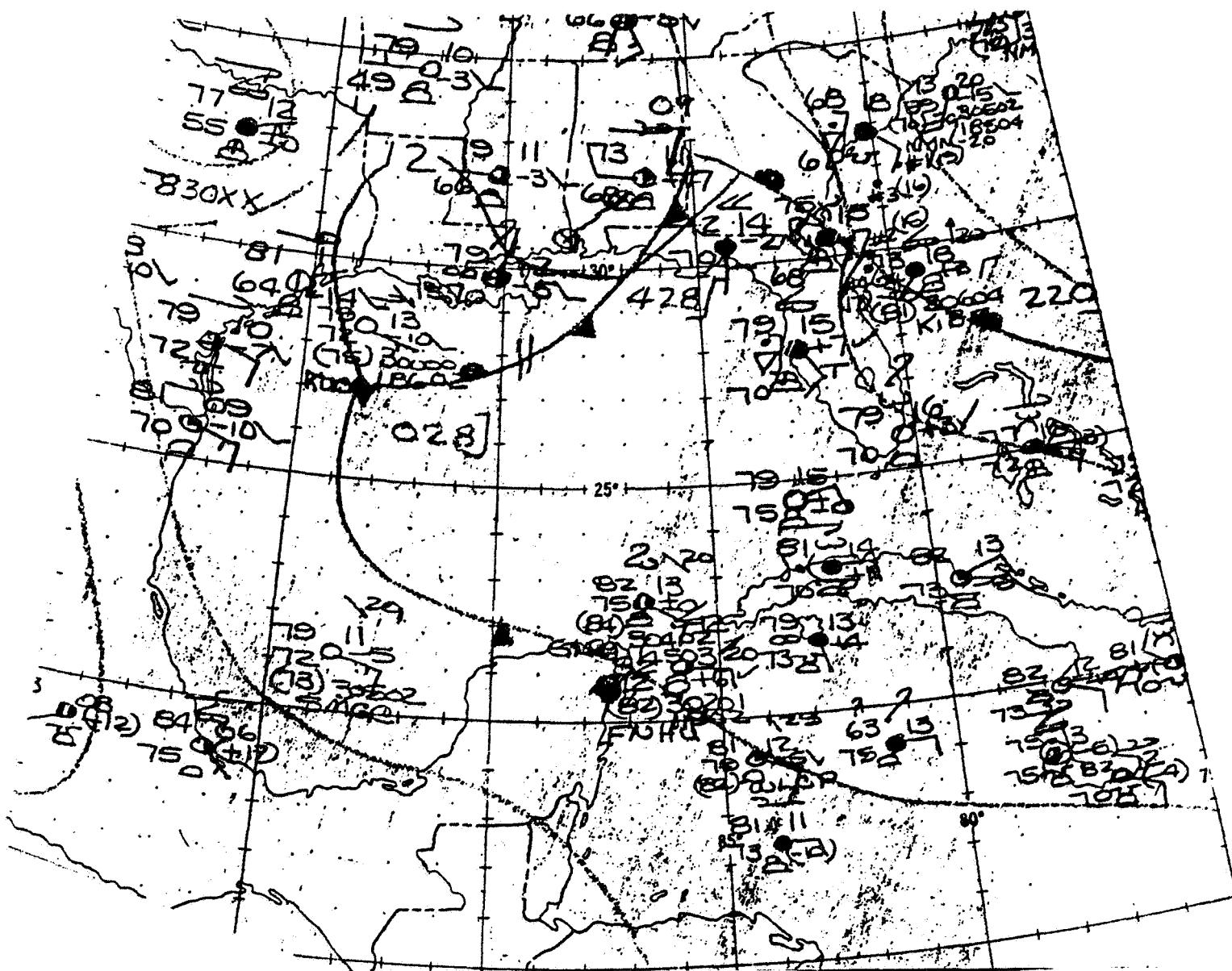


FIGURE 22.

NATIONAL WEATHER SERVICE
NORTHERN HEMISPHERE SURFACE CHART (NMC)
0000Z MAY 14, 1972

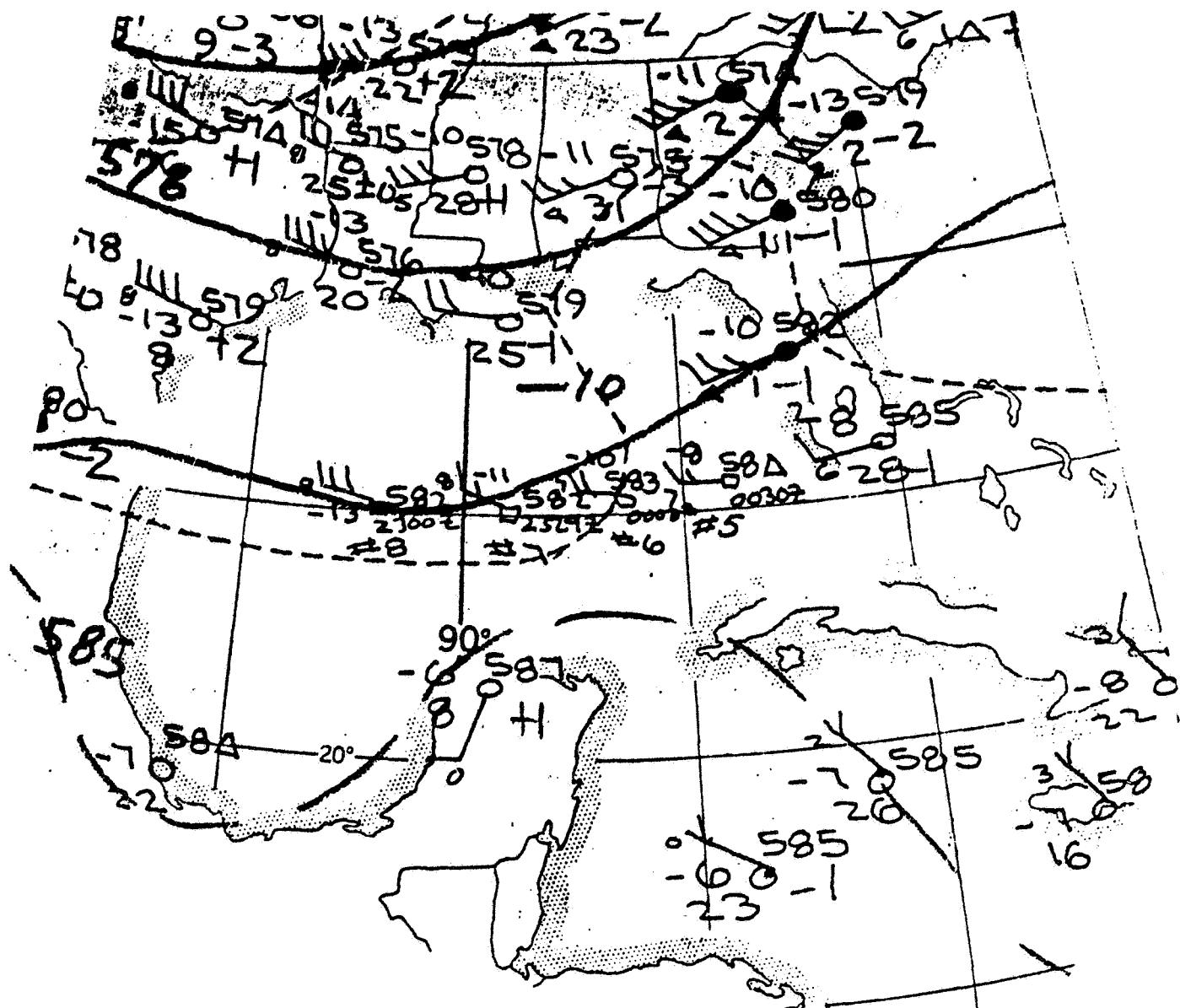


FIGURE 23. NATIONAL WEATHER SERVICE
(NMC) 500 MB ANALYSIS
0000Z May 14, 1972

Table 29. A listing of the Boothville, Louisiana, radiosonde,
0000 GMT 14 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1012.9	25.5	20.3	.0
1000.0	23.1	18.2	113.0
934.0	18.3	16.3	659.3
911.0	19.0	5.8	858.8
850.0	16.4	2.4	1512.0
762.0	11.0	-13.1	2386.4
700.0	5.1	-15.5	3131.0
662.0	2.5	-20.1	3577.6
537.0	-8.4	-18.8	5251.9
500.0	-10.1	-35.1	5793.0
437.0	-16.7	-27.4	6870.5
435.0	-15.9	-39.7	6907.2
400.0	-20.4	-40.4	7481.0
378.0	-23.1	-40.1	7933.6
366.0	-25.3	-33.3	8191.7
359.0	-26.5	-29.9	8346.2
330.0	-31.5	-48.5	9020.1
300.0	-36.7	-53.7	9782.7
283.0	-40.1	-56.1	10249.4
200.0	-47.1	99.0	13026.7
150.0	-59.1	99.0	15328.4
100.0	-66.3	99.0	18572.4

Table 30. A listing of the Key West, Florida, radiosonde,
0000 GMT 14 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1014.0	27.8	21.3	.0
1000.0	26.5	22.0	126.0
965.0	23.4	21.8	411.0
908.0	19.8	14.8	898.2
850.0	16.2	11.4	1536.0
817.0	14.9	10.5	1852.8
700.0	7.8	-.2	3166.0
632.0	2.6	-18.2	3983.6
600.0	1.6	-19.0	4399.3
570.0	-1.8	-14.0	4809.7
560.0	-1.9	-18.9	4951.3
500.0	-7.5	-23.3	5863.0
436.0	-13.7	-28.3	6958.8
400.0	-19.2	-33.9	7565.0
300.0	-32.7	-45.7	9866.7
267.0	-39.1	-51.1	10799.0
200.0	-43.1	99.0	13110.7
178.0	-55.1	99.0	14043.1
150.0	-55.1	99.0	15412.4
120.0	-73.5	99.0	17197.7
100.0	-68.7	99.0	18656.4

TABLE 31 . A listing of the Tampa, Florida, radiosonde, 0000 GMT
14 May 1972.

PRESSURE (MILLIBARS)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (METERS)
1013.6	25.2	20.3	0.
1000.0	25.2	18.0	127.
889.0	17.2	14.0	1149.
873.0	17.2	12.0	1304.
850.0	15.0	11.7	1532.
778.0	10.8	3.5	2277.
728.0	8.2	1.1	2829.
700.0	4.9	.7	3152.
652.0	.4	.0	3727.
629.0	-.6	-1.0	4016.
500.0	-9.7	-10.8	5823.
475.0	-11.7	-15.8	6218.
448.0	-14.1	-16.6	6664.
400.0	-18.9	-25.4	7517.
364.0	-24.5	-32.1	8212.
345.0	-27.1	-31.3	8601.
300.0	-34.4	-38.5	9594.
272.0	-39.8	-45.1	10271.
250.0	-45.2	99.0	10841.
200.0	-59.0	99.0	12286.
167.0	-69.4	99.0	13389.
150.0	-69.4	99.0	14030.
131.0	-69.0	99.0	14839.
111.0	-73.6	99.0	15872.
100.0	-75.9	99.0	16426.

Table 32 . A listing of the Guantanamo Bay, Cuba, radiosonde,
0000 GMT 14 May 1972.

PRESSURE (Millibars)	TEMPERATURE (°C)	DEW POINT (°C)	HEIGHT (Meters)
1008.8	27.2	20.2	.0
1000.0	26.1	19.9	110.0
947.0	23.6	16.3	545.7
873.0	17.4	15.7	1196.7
850.0	16.2	11.4	1524.0
814.0	12.9	12.7	1870.2
792.0	11.2	11.1	2089.5
758.0	9.7	5.5	2440.5
752.0	10.6	4.5	2504.1
737.0	10.2	-14.4	2665.3
700.0	8.3	-16.0	3149.0
588.0	-.5	-20.7	4544.0
551.0	-4.3	-13.9	5064.0
525.0	-5.3	-32.2	5450.7
500.0	-8.0	-30.2	5842.0
581.0	-10.9	-25.5	6152.0
468.0	-12.0	-37.5	6371.2
416.0	-18.6	-27.6	7313.5
409.0	-19.2	-38.2	7449.3
400.0	-20.5	-37.7	7533.0
364.0	-25.9	-38.9	8287.6
330.0	-30.7	-55.7	9072.1
300.0	-36.9	-48.9	9834.7
287.0	-39.3	-45.3	10189.1
250.0	-47.5	99.0	11293.4
200.0	-57.9	99.0	13078.7
150.0	-66.5	99.0	15380.4
104.0	-77.1	99.0	18310.7
100.0	-66.5	99.0	18624.4

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